5: Schwimmer E-4,5 (1966-1967) 1973
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movements were more extravagant and exciting than those of the others; they were allowed, and did, break out of line for extra flourishes that took their fancy while still remaining true to the spirit of each type of dance. A notable feature of the dances is the identification with spirits and animals on the part of the dancers. Mistakes in drumming and dancing are thought very inauspicious for the well-being of the community. Although men and women do not dance as partners, the dances give men a chance to show off their attractions, while the women give signs to men who impress them.

3. *Economics*

Production. The Orokaiva work force involves, in some ways, everybody from the age he can walk almost until the day of death. The very young and the very old are expected to make whatever contribution they are capable of. The division of labour between the sexes has been the subject of enquiry by Williams, Waddell and Krinks. A sex basis in the division of labour is obvious in a great many activities, as the charts clearly show.[7] But even where activities are 'shared' between men and women, it is most common to see each sex group work at a different aspect of the task; they rarely do exactly the same job. Calculations by Waddell and Krinks show that the Orokaiva are fairly fully occupied in terms of the number of weekly working hours. Their calculations suggest that, given the present technology and social organisation, there is comparatively little slack in the working week that could be taken up by cash cropping activities on a major scale.

The working group is most frequently the household, occupied in the *pure*. Sometimes close relatives work together on larger tasks, helping each other in turn. Although old men do maintain their own gardens, they tend to receive frequent help from sons, sons-in-law and sometimes sisters' sons. Co-operation between men is also common during hunting and housebuilding. Co-operative groups of five or more men or women are also seen occasionally, e.g. for making roofing for a house, planting and harvesting yams. Co-operation of a total village is rare, but there are co-operative fishing and hunting expeditions. Activities related to feasting tend to be communal also.

Distribution. The Orokaiva have a subsistence economy where the bulk of goods produced are consumed by the household of the producer. Though patterns of exchange will take up a good part of the present work, it is necessary to state at the outset that only a small percentage of everyday produce enters the exchange system in any way. Waddell estimates that only 4.1 per cent of taro produced in Sivepe is disposed of by sale, gift exchange or barter. While the proportion is twice as high in Inonda, this is due to quite recent changes in the economic network in that area. One is bound to agree with Waddell that food exchanges, whatever their economic utility, are no great drain on Orokaiva resources. Of the produce entering the exchange network only a minute proportion leaves the village where it is grown. At a comparatively large feast I saw in Inonda in 1967, I estimated that Inonda was giving away, at the very utmost, 5 per cent of its annual production. As plantings are always made on a scale sufficient for survival *even if the harvest is poor*, there will be a surplus of at least 5 per cent after a good growing season. Unless the growing season is good,

[TEXT CONTINUED ON PAGE 29]

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include gifts to persons of the same household? It would have been easy enough to lay down a rule that this kind of gift should be excluded from the survey and nor mentioned by informants, but I decided that it was not for me to start defining to the Orokaiva what was meant by a phrase like *ba ikari* 'to give-taro'. Evidently food given to household members was, in certain circumstances, regarded as a gift. I recorded a total of 265 such 'transactions' from fourteen households during the survey period. Among those who mentioned such 'transactions' were some of my most helpful informants. At the beginning of the survey, household members were only sporadically mentioned but the number of mentions increased as the survey proceeded, until a pattern emerged.[2] A gift of food from wife to husband was never mentioned. A gift to a household member other than a natural or adopted child of one or both of the marriage partners was always included. Married daughters and sons old enough to live in a bachelor's house were always included. What confused informants most was how to regard gifts to younger sons and daughters.

Some parents included their children if they were old enough to be of school age. Others included the boys if they had gone through the 'birthday' ceremony which nowadays takes the place of initiation and included the boys if they had been through puberty seclusion. Others again did not include their dependent children at all. There was no uniform pattern. I ascribe the confusion to two factors: first, it used to be customary for children to start working in the garden at a very early age, doing whatever was within their capacity and making some contribution to the household economy. Boys would be given their own small garden plots at an early age and their sisters would fulfil some feminine tasks (planting, harvesting) in these plots. When schooling became general in the district, the children ceased making that kind of contribution. Secondly, school 'lunches' were mostly taken by the children every morning and eaten on the school grounds. These lunches were identical in form to the intra-village taro gifts: they were a meal of cooked taro cooked by the mother and taken out of the home.

Intra-household taro gifts were reported to me in too inconsistent a fashion to permit statistical analysis, but they were interesting as they revealed the household to be, in itself, a minuscule exchange system. This system was intact to a greater extent in Hohorita, where schooling ends at grade 3, than in Sivepe where adolescents are mostly at school rather than in the garden. At Hohorita adolescents grew and (if they were females) harvested vegetable food, gave this to their mothers, and their mothers fed and looked after them. The same principle applied in Sivepe to adults living with their adult and married children, brothers or sisters. Even very old men and women do what gardening they can to make a contribution. The record shows, in the case of some of these old people, that they made hardly any contribution at all during the survey period. As this was a period when taro was becoming scarce, their small gardens were exhausted, but a few months later some of them would again have crops of their own.

Most of the older people who thus depended on gifts for their sustenance were not fed by one household only, though usually one household bore most of the burden. However, wherever there was a helpless old person, there were always at least two regularly contributing households in addition to the one to which that person was attached. We must distinguish, among the Orokaiva,

between co-residence and commensality, notions which the Orokaiva themselves clearly do not regard as synonymous. Persons who are co-resident are always, in practice, at least in part commensal, they are not necessarily wholly so. Not only old people but also bachelors and young women, single or married, receive gifts of taro from other households of which they are the specific recipients. Food they receive in their own residence may therefore be classed as a gift if they have not supplied raw food to the housewife on the same day.

To what extent is there a notion that food gifts should be balanced as between donor and recipient? According to the statistics, perfect balance is uncommon and occurs most often where exchanges are somewhat infrequent. In Table VI/1, I classified households according to the degree of balance in all intra-village taro gifts made to persons resident in other households. The code number 0 indicates perfect balance in the total number of gifts sent and received; the code number 6 indicates an imbalance greater than the proportion 75:25. Intermediate code numbers indicate a lesser amount of imbalance. At first sight, Tables VI/1 and VI/2 suggest that little importance is attached to balance in food gifts. In more than half the households, the total imbalance exceeds the proportion 60:40. Nor does there seem to be an ideological charter enjoining a person who has received a food gift to return that gift in the near future. The donor says he expects no return gift. If one asks him why he has made the gift he never mentions services or gifts received in the past for which he may be reciprocating. He will say, 'because that man is my wife's father's sister's son' or whatever the kinship relation may be.

A more careful look at the figures, however, makes one wonder whether such indifference to balance is the whole story. Some informants stated that though the donor expects no return gift, the recipient often likes to make one. Some families are more punctilious than others in this respect. The most punctilious of all was the leading family of Seho (H5, H12, H13, H14, H20, H21). They all had an imbalance smaller than the proportion 55:45. Only one other household in the sample achieved this low score.

In most of the households where there is an extreme inbalance, the explanation is that the household contains aged people who require help, or that the household is deeply involved in giving help to aged people. This factor accounts for the inbalance in households 1, 2, 3, 6, 7, 10, 18, 18a, and 19. The imbalance in households 8 and 9 is explained by the fact that householder 8 was helping householder 9 to build a house. Householders 5, 15, and 17 were immigrants from Garombi who gave more than they received, probably because of an anxiety to become accepted and build up good relations in their new place of residence.

Finally, the notion of balance is implicit in the timing of many of the taro gifts. It was a very common practice indeed to make a return gift on the same day as a gift of taro had been received, or on the day immediately following. Though informants told me they were under absolutely no obligation to respond so urgently or to respond at all, the record shows that in practice they frequently did so. We must therefore conclude that the Orokaiva do have some notions which lead them to reciprocate taro gifts, even though there is no rule enjoining immediate balanced exchange.

I would suggest that the Orokaiva proceed from a notion that taro is a

Conclusions

423 241 All the attempts to promote communal cash cropping among the Orokaiva have been economic failures. There is no evidence to suggest that they have been successful in any non-economic sense. Each of the ventures has been associated with problems of land tenure, work organization, income distribution and motivation. We will deal with each of these problems in turn.

423 [614] Problems of land tenure: When a sub-clan or other descent group has set aside land for use by a larger body which includes other descent groups, the donor descent group is recognized in terms of traditional culture as having residual rights to the land. These rights may still be recognized by the community even if they have been abolished by legal action in terms of administrative procedures (see pages 10 and 25).(1) A This is particularly so in cases where the setting aside has been the result of a degree of persuasion which appears to the people as compulsion. Strict government supervision can protect the legal rights but, if none of the parties are particularly anxious to have them protected, the supervision needs to be constant and [461] strict to be effective. Even then the results are unlikely to justify the effort required to effect the controls, for supervision by force results in very high overhead costs and seldom motivates workers to maximise output.

241 614 [592] We do not know of any instance of communal planting of cash crops by a single descent group on the land of that descent group. Traditionally all planting was organized at the level of the primary household, with some reciprocal assistance from other households for specific tasks at irregular intervals. If a single descent group did undertake clearing, planting and harvesting of cash crops jointly, tenure problems would be un-

(1) A similar phenomenon was observed in the Ambenob scheme near Madang where the Administration purchased land from the villagers and leased it to the Local Government Council for sub-lease to individual farmers for cash cropping. The purpose of the scheme was to give security of tenure to the individual, but as both vendors and sub-lessees recognized some degree of residual right as remaining with the vendors, a sense of security has not been achieved. This is one reason why sub-lessees are in fact planting their cash crops more on their traditional lands than on their sub-leases.

A, [See Category 423, pp. 10, 25--Analyst]

461 recorded every afternoon, when each able-bodied adult was asked
125 how he had distributed his working hours. Of the population of 50, 25 were able-bodied persons over the age of 16.[1] These fall into 2 distinct categories according to age. Seven householders are between the ages of 45 and 65 years, and the other 5 between 25 and 35 years of age. There were no younger men or boys over 15 years in the village. Five of the women were aged 45 or more, 5 were between 25 and 30, and 3 younger women whose husbands were absent in employment, were staying with their kin in the village. One Jegase woman was a total cripple.

857 Nine of the 24 children attend school and 11 are 5 years of age
[871] or under. The rest, 2 boys and 2 girls in the 10-15 age group gave only intermittent assistance in garden work. The boys would often go hunting but were not engaged in productive work as regularly as their elders. The girls had a relatively heavy schedule of domestic chores.

592 The household containing a nuclear family is the basic unit of production and consumption. Members of an expanded family usually make their gardens on adjacent plots and the men usually co-operate in the heavier clearing work. Its members usually travel together
[462] to their gardens, but each household then cultivates its garden alone. Apart from the harvesting, which is the task of women, the division of labour between sexes in gardening activities seems to be flexible in each household. Women assist in clearing undergrowth for new gardens and men join them in planting and weeding. It will be seen from Table 4 that men spent nearly as much time as the women in subsistence gardening during our survey. A

342 House-building is carried out generally by the householder and
476 any adult sons, with only occasional assistance from a neighbour
[462] or another kinsman. Wives sometimes help to prepare materials such as sago thatch for the roof.

[824] Larger work-groups than these are seldom mobilized for subsis-
[461] tence activities.[2] One or 2 men can readily clear enough secondary growth for their own needs and little co-operation is

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[1] Included among these were 1 man whose activity was restricted by tuberculosis, and another very old man. However, both maintained their own gardens.

[2] E. Waddell (personal communication) suggests that assistance with house-building is not 'occasional' but 'considerable' especially with making roofs; he also points out that large work-groups are assembled for harvesting yams (which do not need to be left in the ground for storage). Neither type of co-operation was in evidence during our short survey of work patterns.

A,[See Category 461, p. 28--Analyst]

621 with some of their co-residents; nevertheless, common residence
614 implies some community of interest and a degree of group solidarity
that is reinforced by Administration and mission policies which
recognise villages rather than descent groups as functional
[431] entities.[1] Marriages between members of the different clan
[476] branches within the village reinforce this solidarity, which is
expressed in such ways as daily food gifts, co-operation in certain
tasks, and joint ceremonial activities.

(b) Social organisation[2]

614 (i) Descent. Every Orokaiva is recruited by birth into the
clan of his or her father. All members of a clan claim, but cannot
[611] necessarily trace, common descent from a usually eponymous ancestor.
[613] Each clan is subdivided into named sub-groups or lineages which
trace their origin to a named ancestor.[3] A lineage comprises, on
average, three households. Usually several clans are represented
in a single village, members of a single clan (clan branches) being
scattered among a number of neighbouring villages. Lineages are
much more localised in character, frequently being confined to a
single village and tending to occupy one section of it.

[622] (ii) Leadership. The Orokaiva social system incorporates no
central authority or hereditary leadership. Instead, it is
[554] characterised by 'big men' (embo dombo) and an ascendency of
elders who have proved themselves equal to the task. Such men
command the respect of the community - based upon observed qualities
of generosity, diligence, wealth, ability to make wise decisions and
skill in arranging ceremonial activities - but it confers no sanc-
tions.

571 (iii) Residence. Post-marital residence is ideally patrivirilocal,
but in practice people have a wide choice between the village of
patrilateral or matrilateral kin or of affines, and it may be
[572] changed at any time. The composition of individual households
[594] within the village likewise varies, although the basis is generally
the nuclear family. The distribution of clan branches through a
[614] number of villages is closely related to access to the group's
[166] land; hence initial motivation for a long-term change in residence

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[1] Cf. comments by Belshaw (1964:277) on villages and descent groups vis-à-vis government policy in Fiji.

[2] For a fuller account see Rimoldi 1966:29-75.

[3] Genealogical depth is slight, descent rarely being traced to an ancestor more remote than the grandfathers of the oldest men.

433 [184] settlements have access to garden land, hunting and foraging areas and creeks but there are considerable variations in availability of these resources, and others such as fish and potting clay. These variations are expressed in the relative significance of the different elements in the work and exchange patterns of different communities.

592 Within the community, the household is the principal economic unit, aiming at self-sufficiency in terms of procuring food, shelter, clothing and production equipment.[1] Thus, gardens are the responsibility of individual households, and the work group for any activity, including clearing and harvesting, seldom exceeds its adult members. [438] Each household produces its own digging-sticks, spears, building materials, sleeping-mats, etc., but axes, bush knives, cooking utensils [476] and clothing are usually obtained from trade stores. For most phases of production co-operation between households is of little importance.

241 A household may maintain between one and five gardens, three being the mean. These average 0.3 acres in size and are generally between five and twenty-five minutes' walk from the village. In some areas, including Inonda and the Yega area, it has recently become popular to plant kitchen gardens adjacent to the houses, often containing manioc, sweet potato, cucurbits, pineapple and even taro. Banana, coconut, breadfruit and 'hingi' (betel pepper) trees are often planted at random around the periphery of the village and in the village square.

The process of garden preparation has been described in the articles cited above.[2] When all but the largest trees have been felled, most of the debris is burned and the remainder piled around the tree stumps. There is no preparation of the soil and crops are planted with the aid of a digging-stick. Gardens are weeded regularly [417] in the early stages, but less frequently as they approach maturity. In the less densely settled areas where wild pigs are common, [136] such as Inonda, most gardens need to be fenced; when separate households have contiguous gardens they usually fence them simultaneously and help each other in this more often than in any other garden task.

[262] The staple food plant of the Orokaiva is taro (Colocasia) and comparatively small areas are planted with the subsidiary root crops of sweet potato, yams, 'German' taro (Xanthosoma) and manioc. Interplanted with the ground crops are large herbs and trees, such as

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[1] Exceptions occur in the case of the elderly or infirm, who are often supported by an offspring's household, and so frequently live in a house adjacent to one or more of them (see Map 4).

[2] See p.23.

A, [See Category 102, p. 38--Analyst]

592 The average size of households[1] is 4.5 persons, otherwise expressed as 2.4 labour units.[2] Of the fifteen households in the sample at the beginning of the survey, only four had individual [249] holdings of cash crops and one man started a holding during the survey (coffee in all cases). Everybody had rights of access to a communal rubber plantation which was tapped by individuals on a rota system.

464 Most household heads have worked for wages as unskilled or semi-skilled labour (plantation workers, rubber tappers, domestic servants and labourers for the Australasian Petroleum Company). 871 The highest level of education reached by any householder was standard II.[3] Standard IV is the highest level attained within the sample (including children), although one absentee completed standard VI at a government school at Kokoda.

622 Although the sample includes the local government councillor for Sivepe and the adjoining villages of Binduta and Awala, he only recently arrived in the village and exerts limited authority.[4] [241] The village as a whole possesses no universally accepted spokesman or leader[5] and the repeated failure of communal ventures[6] may be related to this fact.

Economic holdings

433 Within the subsistence sector, a key factor in the pattern of exchanges is the fluctuating resources of particular foodstuffs in production at a given time in a given household: when an individual has no producing taro he is dependent on others, when he has excess he distributes. Significantly, at the time of the survey of

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[594] [1] For the purposes of this survey, a household is a group of people gardening, cooking, eating and budgeting together. It is basically the nuclear family, perhaps including unmarried kin or widowed or divorced parents (although these may operate as independent households). The household invariably resides under a single roof. Cases of two households living together occur and their frequency in Inonda helps explain the larger mean size of house.

[128] [2] Labour units were calculated on the following basis:

Age	5-9 years	10-14	15-19	20-44	45+
Male	0.1	0.3	0.8	1.0	0.8
Female	0.2	0.4	0.7	0.8	0.6

[3] See Appendix 1.4 [4] See Rimoldi 1966:55-6.

[554] [5] One man, adopted into Timumu clan, is asserting himself increasingly through his generosity, organising ability and industriousness.

[6] See pp.44-5 and Rimoldi 1966:84, 107-8.

A. [See Category 871, p. 307--Analyst]

8: Waddell & Krinks E-4,5 (1964-1965) 1968 OJ23 Orokaiva OJ23

433 subsistence holdings in Sivepe, three individuals had no producing staple foods in their gardens.

592 Three of the fifteen households surveyed comprise only a single member. Two of these were a married couple who were considered, for the purposes of the survey, as separate households on the grounds that the wife lived for only short periods with her husband, dividing most of her time between her brother's and her father's houses instead.[1] The husband and the third individual, an old man, lived in their own houses, although the former abandoned his on departure from the village in August. One widowed woman and her children had no house of their own but shared those of primary kin until the end of March when she left to marry a man in another village. A second family left at about the same time, in search of wage employment. Thus, by November 1964, the number of households had fallen to twelve while for most purposes the separated woman (household 8) had become a member of her parent's household (14).

All the identified households cultivated separate gardens. For most of the survey period, two households had attached to them the wives and children[2] of two men at work outside the District. Both household heads, in establishing a garden, set aside a portion for the sole use and responsibility of these women, as they were expected to contribute to the household's food requirements.

(a) Food gardens

24 [125] A detailed survey was made of the holdings of seven households, selected to provide a cross-section of the community in terms of status of head, structure of household and involvement in cash cropping. These data were then compared with that collected by Rimoldi almost two years previously (see Tables 4:1 and 4:2). While the small size of the samples, 11 and 7 households respectively, makes it dangerous to draw conclusions, a few observations can be made.

Table 4:1 reveals a fall of 44 per cent in the average size of holdings planted with taro (Colocasia) and sweet potato. In 1964, the maximum sizes of taro and sweet potato areas were much lower than in 1963. This is offset, however, by very substantial increases to three and nine times (respectively) in the average plantings of yams and Xanthosoma. The holdings of two young household heads were responsible for almost all of these increases.[3]

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[1] i.e. effectively there were only 14 households, as recorded in Appendix 1.

[2] In one case, the daughter of the household head and her son, and in the other, the man's wife and her son.

[3] One has established a yam garden of 0.16 acres and the other a Xanthosoma garden of 0.15 acres.

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Table 4:1

Sivepe: mean garden areas under cultivation, 1963 and 1964*
(acres)

Garden	Per head of population		Per able-bodied person (over 16)		Per household	
	1963	1964	1963	1964	1963	1964
Currently producing	0.14	0.05	0.27	0.10	0.57	0.20
Planted but not producing	0.12	0.11	0.23	0.20	0.48	0.43
Cleared only	0.10	0.04	0.20	0.08	0.43	0.17
Total area under cultivation	0.36	0.20	0.70	0.38	1.48	0.80

[125]

* Feb. 1963, 11 households, Dec. 1964, 7 households, all of which were included in the preceding survey.

Table 4:2

Sivepe: food plants per household, 1963 and 1964*

Crop		Average		Range	
		1963	1964	1963	1964
Taro (Col.)	(acres)	0.97	0.54	0.39-2.30	0.40-0.72
Sweet potato	(acres)	0.07	0.04	nil-0.20	nil-0.07
Bananas	(plants)	71	128	35-126	73-231
Sugar-cane	(clumps)	34	40	11-54	21-99
Ina	(plants)	88	54	nil-400	24-104
Yams	(vines)	65	202	nil-136	nil-892
Manioc	(plants)	few	10	few	2-30
Xanthosoma	(plants)	28	252	nil-91	nil-1027
Corn	(plants)	223	65	nil-442	nil-157
Pineapples	(plants)	nil	4	nil	nil-24
Cucurbits	(vines)	13	5	9-28	nil-14
Shallots	(plants)	few	1	few	nil-6
Beans	(plants)	17	15	nil-110	nil-63
Tomatoes	(plants)	nil	1	nil	nil-3

[125]

* Feb. 1963, 11 households, Dec. 1964, 7 households, all of which were included in the preceding survey.

Between the two surveys, cultivated area per head fell (see Table 4:1) to 55 per cent of the figures collected by Rimoldi and close to that considered the minimum requirement for shifting

554 councillor for the villages of Inonda, Ajoro, Hohota, Mosou and Sewa. He is the senior resident member of the traditionally-dominant lineage and the trade store owner. He initiated the building of the copra-drier and takes the lead in most other new undertakings and at times of crisis or dispute, though his views are sometimes successfully opposed. In land matters he defers to or seeks the advice of the oldest male resident.

Economic holdings

241 [126] The data on crop patterns and areas of subsistence gardens are presented with the data for 1962 given by Crocombe and Hogbin (1963:7-10). The figures for garden areas are not strictly comparable, since the 1964 data on garden areas, though not on crop numbers, were obtained by mapping from aerial photographs whereas the 1962 figures were calculated from the results of chain and compass surveys. This latter technique was used in 1964 for mapping the areas under taro and sweet potato. Other crop data were obtained by counts in the gardens. Information on holdings of economic trees and the inventories of household property were derived from interviews and were not checked on the ground, except for trees recently planted in the village surrounds.

[592] Although the mean size of household is 3.9 people, two households contain only one adult. There is considerable flexibility in residence and in arrangements for making gardens. For instance, the mother of the wife of one household head came to settle in the household permanently in July 1964; she maintains her own garden, which was cleared by her son and her daughter's husband. Another household comprises a widower who makes his own gardens and has the highest cultivated area of any household; however, his eldest son's wife, in a separate household, does some of his harvesting and prepares most of his meals. The widower also makes gardens for the widow who heads household 18. This woman lived with her two youngest children until August, when her eldest son and his family (household 21) moved into her house on the new village site. Another garden was made on her behalf by her brother in another village. Household 24 comprised the parents of two sisters who had married Inonda men. At first, they lived with household 23 at the old site but moved in October to join household 21. They maintain their own gardens.

(a) Food gardens

At the beginning of February 1964, the nine Inonda households were cultivating 27 gardens, at a mean distance from the village of 0.5 hours' walking time. In December 1964 the eight households remained after the departure of the Jego'undi man had 29 gardens at a mean distance of 0.3 hours' walking time.

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

241 In November 1964, the total area cultivated by the villagers was 10.27 acres. Table 4:8 shows the average area for each person, for each able-bodied person over 16 and for each household. The comparable figures for 1962 show that there has been a decline in the cultivated area of 15 per cent per person and per able-bodied adult, and 22 per cent per household, this latter reflecting the smaller mean size of households (3.9 in 1964 against 5.6 in 1962).

Table 4:8

Inonda: mean garden areas under cultivation, 1962 and 1964
(acres)

Per head of population		Per able-bodied person (over 16)		Per household	
1962	1964	1962	1964	1962	1964
0.31	0.27	0.67	0.57	1.47	1.14

Table 4:9 shows the crops produced in the gardens. As in Sivepa, there has been a marked decline (amounting to 49 per cent) since 1962 in the area planted with taro and sweet potato and in the number of sugar-cane and ina clumps, but there have been compensating increases in yams and Xanthosoma and lesser increases in manioc,

Table 4:9

241 Inonda: food plants per household, 1962 and 1964*
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Crop		Average 1962	Average 1964	Range 1962	Range 1964
Taro (Col.)	(acres)	1.3	0.70	0.4-2.6	0.24-0.92
Sweet potato	(acres)	0.2	0.06	nil-0.4	nil-0.18
Bananas	(plants)	81	88	12-145	34-144
Sugar-cane	(clumps	71	31	34-167	17-50
Ina	(clumps)	56	7	4-181	nil-18
Yams	(vines)	24	57	nil-61	4-241
Manioc	(plants)	10	14	4-27	nil-34
Xanthosoma	(plants)	5	39	nil-25	nil-138
Corn	(plants)	72	79	nil-140	nil-204
Pineapples	(plants)	1	17	nil-7	nil-43
Cucurbits	(plants)	2	12	nil-10	5-25
Shallots	(plants)	few	nil	n.a.	nil-4
Beans	(plants)	few	nil	n.a.	nil
Tomatoes	(plants)	few	1	n.a.	nil-6
Pawpaw	(plants)	n.a.	41	n.a.	14-78

* 1962, 8 households; 1964, 9 households.

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592 bananas, corn, cucurbits and pineapple. The change is probably due to the storable qualities of yams and Xanthosoma and the comparatively small amount of attention required during growth by each of the crops showing an increase. The slight increase in corn plantings is due specifically to one man sowing a 'catch-crop' in a garden cleared for coffee. The increase in the number of yam vines, on the other hand, is evident for several households. Although two households had no Xanthosoma, the others all exceeded the 1962 average. Of the four households which had more than 20 pineapple plants, two intended to market some of their produce.

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231 (b) Economic trees and livestock

Table 4:10 shows the average holdings of economic trees and livestock per household. Following the change in the village site, all householders planted several coconut palms around their homes

Table 4:10

Inonda: economic trees and livestock, 1964

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Item	Average per household*		Range (bearing only)
	Bearing**	Planted in last year	
Breadfruit	3	nil	nil-18 trees
Areca palm	1	6	nil-8 "
Coconut	17	25	6-35 "
Hauga	1	nil	nil-3 "
Pandanus	5	nil	nil-16 "
Sago	4	nil	nil-9 "
Mango	1	nil	nil-2 "
	Total		Range
Pig	2		nil-1 animals
Dog	6***		nil-2 "
Cat	2		nil-1 "
Fowl	7		nil-3 "

* Eight households only. Information was not obtained for one household, a widow originating from Urio village. It is unlikely that she possessed rights to trees in Inonda (cf. Crocombe and Hogbin 1963:47), although her sons would.

** One householder claims extensive holdings of the specified trees on the lands of his home village of Hohorita. These holdings, which he did not exploit during the survey and which are excluded from the above figures, include: coconuts, 30; areca palm 10; sago, about 50; breadfruit 20; pandanus, at least 50. The claimant is the sole survivor of a large family killed when Mt Lamington erupted.

*** Including 3 pups.

512 [751] [164]

Systematic data gathered on sickness refers primarily to activities of a preventative nature - the periodic infant welfare clinics and, in one week during period III, a TB survey involving X-rays and Mantoux tests accounted for 9.1 hours per man. However, in the survey as a whole, a mean of only 0.9 hours per man-week was incurred by sickness.

Activities of a minor nature account for an average of 0.8 hours per man-week and include sport, services rendered to the researcher and, during period III, the expenditure of 0.7 hours per man-week in the preparation of the new village site. By the end of the survey much of this site had been cleared and a number of individuals were planting 'catch crops' of taro and bananas.

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Within the total Sivepe economy 'productive' activities account for 29.8 hours expended per man-week, or 73 per cent of activity time. However, the productive component within the subsistence and external sectors differs greatly, being 89 per cent of activity time in the former but only 30 per cent in the latter. The absolute insignificance of cash-producing activities should be viewed in this context, of the relatively unproductive nature of Orokaiva involvement in the external economy.

The organisation of work by households

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Table 6:5 reveals substantial variations in both the volume and patterns of activity between individual households which, while they enable a distinction to be drawn between cash cropper and non-cash cropper, are largely explicable in terms of the structure and composition of the households themselves.

With a mean activity-week of 40.6 hours recorded, the individual household range is 29.4 to 65.3 hours. However, household 12, in which the 65.3 hours per man-week are expended, is somewhat aberrant in that it consists of a widowed woman with six children, the eldest of whom is a full-time nurse at the infant welfare clinic at Sasembata, to which job she devoted an average of 53.7 hours per week. The work accounts for almost half the time expended per man-week by the whole household. This, and the absence of an adult male, seriously undermined their ability to carry out essential subsistence tasks - so they only spent 11.1 hours per man-week on clearing, subsistence gardening and other subsistence food production compared with the sample mean of 19.4 hours. Significantly, by the end of period I the household had left the village, the mother to re-marry and the eldest daughter to reside on the mission station. By eliminating household 12 the range is reduced to 29.4 to 50.4 hours per man-week.

[887]

At the lower end of the range are households incorporating the oldest people in the village. While probably less productive in their labour, these people are deprived of a much higher proportion

[TEXT CONTINUED ON PAGE 96]

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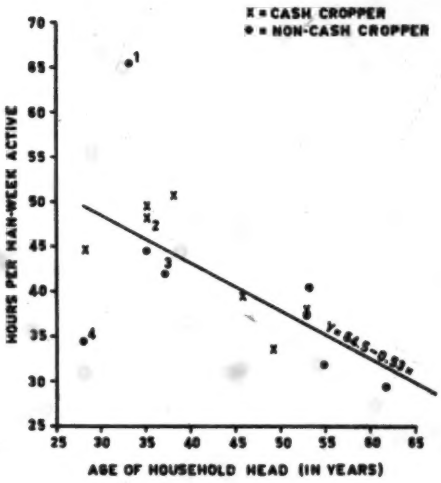
SIVEPE FIGURE 6:6

RELATION BETWEEN ACTIVITY TIME, AGE AND CASH CROPPING STATUS, SHOWING THE LINE OF AVERAGE RELATIONSHIP BETWEEN TIME AND AGE



ANOMALOUS HOUSEHOLDERS:
1 Divorced woman, eldest daughter in full time employment
2 Divorced woman
3 Recent arrival, temporarily linked by marriage
4 Temporarily resident only
1 and 3 left the village part-way through the survey

of available labour time through sickness.[1] All seven households headed by people in the 45+ age group are characterised by a below average activity week. Only one other household is below average (4), a couple who were resident for only 12.3 man-weeks, before

[887]

[1] See Table 6:3. A

A, [See Category 164, p. 79--Analysis]

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

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leaving in search of employment on a plantation. These people had only recently arrived in the village and their brief term of residence suggests that their subsistence activities could not be considered fully operative.

The least active household, 6, consists of a single man, who is the oldest individual in the sample. While the time he devotes to the basic food producing and related activities (clearing, subsistence gardening, other subsistence food production) closely accords with the mean for the whole sample - 20.0 hours per week, compared with the mean of 19.4 - he devotes little time to other activities. For food preparation he is almost completely dependent on his married daughter living in an adjacent house. He therefore spends virtually no time in household tasks and his is the only household not participating in any cash producing activities.

The households headed by individuals under the age of 45 years are the most active. Furthermore, these households are almost invariably cash cropping ones. Fig.6:6 suggests a linear relationship between the amount of time spent active and the age of household head, although it should be stressed that the sample is small and the correlation coefficient is not particularly high.

There are many reasons for the inter-household variations in levels of activity including individual inclination and circumstances. In all cases a primary concern is to achieve subsistence. Householder 7 spent almost 2.5 times the mean time devoted to clearing as a result of his recent arrival in the village (and temporary linkage by marriage to Timumu clan). His decision to settle in his wife's village was largely motivated by its proximity to land over which he was a primary rightholder and which he had been prevented from exploiting previously by its remoteness from his paternal village. Similarly his wife (householder 8), prior to their separation, assisted him in the substantial task of clearing the site for their new food garden. While these two spent, respectively, 8.9 and 3.2 hours per man-week on clearing, two other households spent less than 1.5 hours per man-week. One was the widowed woman and young family who left to remarry during period I. The other was a somewhat senile widower who succeeded during the survey in attaching his married daughter's household to his own with the object of transferring responsibility for all gardening activities to his daughter's husband who would, in return, inherit all rights to his land.

Although the members of household 4 were, like householder 7, recent arrivals in the village, they spent little time in clearing because, as events subsequently demonstrated, they had no intention of remaining. But, displaced from the rest house by the researchers, they were obliged to erect a small house for themselves, hence the very high figure of 6.4 hours per man-week spent on other subsistence activities.

Table 6:3

Fixed activity patterns of households over the whole survey period
(hours per man-week)

Household no.	1*	2*	3*	4	5*	6	7	8	9*	10	11	12	13*	14	15*	411 households Total	Mean	Cash cropping households Total	Mean	Non-cash cropping households Total	Mean
No. of adults	4	4	2	2	3	1	1	1	2	2	4	2	2	2	2	35		19		16	
No. of man-weeks recorded	91.0	79.3	53.7	52.3	68.0	28.6	17.4	26.6	50.6	41.7	73.6	16.7	48.6	42.0	32.0	712.9		436.2		276.7	
																(hrs)		(hrs)		(hrs)	
Clearing	3.2	3.8	3.0	3.3	1.4	4.3	8.9	3.2	3.5	3.8	3.2	1.3	3.1	3.0	3.3	2,614.7	3.7	1,447.9	3.3	1,166.8	4.2
Subsistence gardening	12.2	12.6	10.9	14.0	9.3	12.5	12.7	14.2	16.2	20.6	9.9	9.3	14.6	14.1	17.4	9,406.3	13.2	5,696.1	13.1	3,710.2	13.4
Other subsistence food production	0.5	0.9	6.2	1.1	3.6	1.2	0.3	1.3	4.3	0.8	2.3	0.3	3.9	2.0	4.3	1,708.3	2.5	1,305.9	3.0	402.4	1.7
Other subsistence activities	1.0	0.3	0.9	0.4	2.0	2.9	11.4	0.3	1.3	4.7	1.1	0.1	1.8	1.9	2.7	1,250.6	1.9	599.9	1.4	742.7	2.8
Cash cropping	2.1	1.3	3.7	0.2	1.8	-	0.1	1.4	4.4	0.3	0.4	0.3	2.9	0.7	2.3	1,119.3	1.6	989.7	2.3	129.6	0.5
Paid work	-	-	-	-	2.3	-	-	-	-	-	2.6	29.8	-	-	2.1	1,138.8	1.6	440.7	1.0	688.1	2.5
Household	3.8	5.3	4.9	2.9	5.3	0.3	-	9.3	7.4	4.3	3.2	0.6	7.8	4.7	6.7	3,798.2	5.3	2,644.6	6.1	1,148.6	4.2
Social obligations	3.0	2.4	4.9	3.5	3.0	1.9	3.5	4.9	3.4	3.9	3.7	3.0	3.7	3.1	3.2	2,423.2	3.4	1,423.9	3.3	999.3	3.6
Sick	0.9	0.8	1.1	-	1.0	0.7	0.1	0.8	0.9	-	0.4	3.6	1.2	0.3	1.3	623.1	0.9	446.2	1.0	176.9	0.6
External agencies	4.8	3.4	0.7	2.7	4.2	3.3	4.6	7.9	6.4	1.7	2.8	0.7	7.3	4.3	6.3	4,134.7	5.8	3,041.2	7.0	1,093.5	3.8
Other	1.0	0.1	2.5	0.1	0.7	-	0.1	0.8	0.3	-	2.0	-	1.0	0.7	0.9	681.7	0.9	388.6	0.9	213.3	0.8
Total	39.7	33.3	46.7	36.2	37.9	29.4	41.8	44.4	48.4	48.1	31.8	48.3	49.1	37.6	30.4	28,976.1	40.6	18,448.3	42.3	10,335.6	36.1

* Cash cropping households.

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8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

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All three households devoting less than ten hours per man-week to subsistence gardening had at least one member in paid work at some stage, suggesting that this latter activity might interfere with basic village tasks.[1] By contrast, increasing involvement in cash cropping does not appear to affect subsistence gardening activities. Household 9, with the heaviest commitment to cash cropping, expended 16.2 hours per man-week on subsistence gardening, well above the average.

The four households most concerned with other subsistence food production (all above 3.8 hours per man-week) are all cash cropping households headed by people under the age of 44 years. Three of them have direct access to shotguns and, with ready cash to buy cartridges, are frequent hunters. Likewise such younger men take the initiative for making sago when food is scarce.

Householder 7 spent 27 per cent of his activity time in other subsistence activities, uniquely in house construction. Having recently arrived in Sivepe he not only had to build a house for his wife and himself but, wishing to ingratiate himself with his affinal kin, spent a substantial amount of time assisting others in their construction work.

[m] While virtually all households are involved in cash cropping the ones directly exploiting rubber and coffee are, as is to be expected, more heavily committed. Furthermore, the cash cropping households spend more time interacting with the external agencies and their involvement in the external economy is, in effect, broadly based.

With the exception of the old widower (6), the amount of time households devote to fulfilling social obligations varies little from the mean of 3.4 hours per man-week - all appear to be similarly involved in the network of social interaction.

There are, however, very substantial variations in the time spent on household tasks, the range being nil to 9.5 hours per man-week. These variations are a direct expression of differing age and sex compositions and the varying degrees of interdependence between households. So householders 6 and 7 are almost entirely dependent on others for the daily preparation of their food, while the greater time devoted by the cash cropping households (6.1 compared with 4.2 hours per man-week) is connected with the fact that the heads of such households are younger and have many dependent children.

In conclusion, where substantial deviations occur from the 'normal' activity patterns they are generally explicable in terms

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[1] However, paid work does not appear to conflict greatly with other subsistence food production, because of the more irregular nature of the activities.

of individual circumstances rather than degrees of specialisation. While cash cropping households are clearly more active than the others, the substantially greater time they devote to the external sector accounts for the differential and they are no less active within the subsistence sector than their non-cash cropping counterparts. This is clearly demonstrated if household 12 is excluded from the calculations.

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Table 6:6

Sivepe: contrasting activity patterns of cash cropping and non-cash cropping households*
(hours per man-week)

	Subsistence sector		External sector		
	'productive'	'non-productive'	'productive'	'non-productive'	Total
Mean	26.7	3.4	2.5	7.5	40.1
Cash croppers	26.9	3.3	3.3	8.8	42.3
Non-cash croppers	26.7	3.3	1.2	4.9	36.3

* Household 12 excluded.

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The division of labour

(i) By sex. Although there is little variation in length of activity week between the sexes, the men distribute their time more evenly through a broader range than the women who tend to confine their attention to a few specific tasks (see Fig.6:7). Sixty-one per cent of the women's time is devoted to subsistence gardening and household tasks compared with only 29 per cent for the men; however, the latter give substantially more attention to clearing, other subsistence food production and other subsistence activities than the women (11.5, 10.9 and 8.6 per cent respectively compared with 6.7, 1.6 and 1.1 per cent) while retaining subsistence gardening as quantitatively the most important of their grouped activities. Consequently the broad allocation of time between subsistence and external, productive and non-productive activities does not differ substantially for the two sexes; the men spend 69.8 per cent of their time on productive activities and 70.3 per cent on subsistence and the women 76.3 per cent and 77.0 per cent respectively. Rather it is a matter of the women concerning themselves essentially with the daily routine of harvesting and preparing the staple foods for consumption while the men turn to the more irregular, and frequently more arduous tasks such as house construction, hunting and sago-making. In part, no doubt, this pattern reflects the formal authority structure in the household in that the men delegate responsibility for meeting routine needs to the women while they

[TEXT CONTINUED ON PAGE 101]

461 The analysis of work organisation within the framework of specific activities reveals that the essentially non-productive aspects of travel and leisure account for almost as much time as that devoted to productive tasks. Thus, while the activity day is reasonably long there is immediate scope for improving efficiency at this level, and the interest currently being shown in land tenure conversion among the Orokaiva, plus the distinctive time and motion patterns of the cash croppers and younger householders possibly reflect some realisation of this.

The nature and size of work groups

[181] Both Keesing (1952:19) and Reay (1953:111) have remarked upon the highly individualistic nature of the Orokaiva and this trait is clearly reflected in their work patterns. The household, com-
[592] prising a nuclear family, is the basic unit of production and consumption[1] yet seldom do all its members work together on a single task. The pattern is rather for individuals to perform distinct but mutually compatible tasks at the same location. In one such case, where the four adult members of a household spent a six-hour period together in the same garden, the following allocation of work and sequence was observed:

[462]
Husband and son - clearing bush
Wife and daughter - weeding taro
Wife - collecting taro tops (for planting)
Son - planting taro
Wife - collecting sweet potato (for consumption)
Husband - collecting yams (for consumption)

Likewise, members of an expanded family frequently travel together to and from their separate, but adjoining, gardens and perform similar tasks within their respective areas.

In Table 6:13 work groups are defined narrowly, in terms of individuals performing the same task together at the same site,
[476] and as such they are normally seen to comprise less than two adults. The main exceptions are activities where collaboration is specifically

[1] Only 9 per cent of all activity time is rendered in the form of labour services to other households. Nevertheless, the daily distribution of food is an important facet of Orokaiva life, and its scale contradicts to some extent these individualistic notions, suggesting that communalism is reflected by exchange rather than co-operative effort. See Part III for an analysis of the exchange system.

[TEXT CONTINUED ON PAGE 116]

The organisation of work by households

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There is very little difference between households in the total amount of time spent each man-week on all the different activities. With the exception of the widower in household 19, the range is from only 2.2 hours below to 2.9 hours above the mean of 43.5 hours per man-week. However, there are considerable differences between households in the proportions of labour input allocated to the various activities (see Tables 7:5 and 7:6). Most spend roughly comparable proportions of their time in garden clearance. Households 19 and 24 are exceptions. The former, a widower, did a considerable amount of clearing on behalf of the widow in household 18. The couple in household 24 likewise gave help in clearing and planting, to household 23 in particular.

[470]

There are wider differences in the time allocated to subsistence gardening. Households 18 and 24 spend most time in gardening, followed by household 19. Although this may partly reflect a greater amount of time required by the older people comprising these households to achieve subsistence, it is significant that 18 and 24 are also pre-eminent in the amount of garden produce disposed of each week and that the widower in household 19 puts a greater proportion of his working time than anyone else into assisting others (see Table 11:8). The head of household 18 is a widow (successively of three Inonda men) and has only permissive rights to Inonda lands. Household 24 is in a somewhat similar position, being resident because two daughters are married to Inonda men, and it seems likely that both these households strengthen their positions in the village through generosity towards others.[1] In return for his assistance, the widower receives most of his food from others and so spends little time in cooking. Three households devote less than the average amount of time to gardening. Household 23 instead spends more than the average in entrepreneurial activities and in activities connected with the external agencies; household 21 also devotes considerable time to the latter, including purchasing and church services. Apart from the widower, household 17 has the shortest working week.

[437]

The three households spending most time in gardening spend least in the other food-producing activities - fishing, hunting, gathering of forest products and sago-making. In activities demanding agility or stamina younger people are naturally more prominent. The head of household 20 is the best marksman and hunts frequently. He also helped a cross-cousin in sago-making and his wife often fishes. In fact, this household spends more time in this class of activity than

[1] Crocombe (1966:78) considers that this was the basic motive for a birthday party given by the head of household 24 in 1962.

[TEXT CONTINUED ON PAGE 143]

Table 7:5

Iaonda: activity patterns of households over the whole survey period
(hours per man-week)

Household no.	16*	17*	18	19	20	21*	22	23*	24	All households Total		Cash cropping households Total		Non-cash cropping households Total	
											Mean		Mean		Mean
No. of adults	4	3	2	1	3	2	2	2	2	21		11		10	
No. of man-weeks recorded	71.4	53.9	26.1	26.0	51.6	45.4	19.1	49.7	38.1	381.4		220.4		161.0	
										(hrs)		(hrs)		(hrs)	
Clearing	2.2	2.5	2.0	4.8	2.7	2.3	1.9	3.3	4.9	1,107.9	2.9	546.2	2.4	561.7	3.4
Subsistence gardening	11.7	10.0	16.3	13.5	11.3	8.8	12.2	9.8	16.2	4,479.5	11.7	2,263.0	10.3	2,216.5	13.8
Other subsistence food production	7.9	8.9	4.7	4.6	12.0	8.1	5.4	7.1	4.5	2,869.5	7.5	1,723.8	7.8	1,145.7	7.1
Other subsistence activities	2.7	2.8	3.2	5.9	3.7	5.4	0.8	3.3	2.6	1,292.7	3.4	751.5	3.4	541.2	3.4
Cash cropping	2.3	0.4	0.8	0.2	0.2	2.1	-	1.0	-	365.5	1.0	329.3	1.5	36.2	0.2
Paid work and entrepreneur	1.5	2.6	-	-	2.5	1.4	13.2	5.7	1.8	1,042.6	2.7	591.7	2.7	450.9	2.8
Household	3.8	4.1	4.0	0.9	4.0	4.7	1.0	4.9	4.2	1,459.5	3.8	944.4	4.3	515.1	3.2
Social obligations	4.6	4.2	6.1	2.2	3.6	5.5	4.5	2.7	4.2	1,595.7	4.2	944.6	4.3	651.1	4.0
Sick	2.7	2.4	1.4	0.1	1.5	2.0	-	1.3	0.1	598.5	1.6	475.4	2.2	123.1	0.8
External agencies	3.6	2.9	2.8	1.0	2.7	4.7	1.4	4.8	2.8	1,241.6	3.2	864.6	3.9	377.0	2.3
Other	1.3	1.3	0.8	0.4	2.4	1.4	3.9	1.7	0.7	567.3	1.5	312.5	1.4	254.8	1.6
Total	44.3	41.3	42.1	33.6	46.4	46.4	44.4	45.8	42.1	16,620.3	43.5	9,767.0	44.4	6,853.3	42.6
Mean length of active day**	6.6	6.1	6.7	5.1	6.8	6.7	6.7	6.9	6.6						

* Cash cropping households.
** Excluding days sick.

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8: Waddell & Krinks E-4,5 (1964-1965) 1968 OJ23 Orokaiva OJ23

Table 7:6

Inonda: activity patterns of households (adjusted)[1]

Household	Number of man-weeks	Total hours		Hours per man-week	
		Household tasks	Total	Household tasks	Total
16*	71.4	669.1	3,559.4	9.4	49.8
17*	53.9	571.2	2,574.0	10.6	47.8
18	26.1	388.7	1,384.4	14.9	53.0
19	26.0	22.5	873.7	0.9	33.6
20	51.6	521.0	2,741.1	10.1	53.1
21*	45.4	518.9	2,414.5	11.4	53.2
22	19.1	148.1	976.2	7.8	51.1
23*	49.7	583.3	2,617.2	11.7	52.7
24	38.1	436.7	1,880.1	11.5	49.3
Total	381.4	3,859.5	19,020.6	10.1	49.9
Cash croppers	220.4	2,342.5	11,165.1	10.6	50.7
Non-cash croppers	161.0	1,517.0	7,855.5	9.4	48.8

[1] Table 7:6 shows the relevant parts of Tables 7:3 and 7:5 recalculated taking the adjusted average figure for household tasks into account. For an explanation see p.136.
* Cash cropping households.

in gardening. Although the leading man is one of the most successful hunters, his household spends a little under the average amount of time on these other food-producing activities, and only a small amount of time is devoted to sago-making in comparison with several other households - notably 16, 17 and 21.

The remaining subsistence activities are the preparation of tools and equipment, and construction. As household 22 did not build a house on the new village site it spent little time on this category of activity. In contrast, the men in households 19 and 21 helped the widow build her house, as well as joining the other men in building the copra-drier, and these households have the greatest weekly input of labour into these activities. There is little difference between the levels of the other households.

Only three households spent one or more hours a week on cash cropping. Two of these have mature coffee trees and the third is establishing a new coffee garden. In addition to looking after their own coffee, members of household 16 assisted kinsmen in Ijika and on the settlement block in establishing and maintaining coffee and cocoa trees. The head of this household is the only member of the OCGS in Inonda. While most of the time spent on cash crops by households 16 and 21 was on coffee, much was on the copra project,

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

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and this latter accounted for most of the time household 23 devoted to cash cropping. It is interesting that household 17, which owns 107 mature coffee trees, spent less time on them during the survey than household 18, a non-cash cropping household, spent in assisting others with their coffee. The head of household 17 expressed dissatisfaction with his returns from coffee and did not fully harvest the yield of his trees, although the price was double that of the previous year. The small amounts of labour spent in cash cropping by other households result from their assisting owners of coffee trees and collecting and opening coconuts in the communal copra project. Although the inputs of labour by non-cash cropping households are small, even those of households 16 and 21 amount to only 5 per cent of their total activity time. Apart from the widow and widower, these same household spend the lowest proportion (both 3 per cent) of their time in paid work.

All the households spent some time in cash-producing activities, but the widow and widower only assisted others in cash cropping and the heads of households 22 and 24[1] worked only in paid employment. For the Jego'undi man in household 22, paid work was the single most time-consuming activity, exceeding subsistence gardening in spite of his household spending more time in gardening than the average, and it is worth noting that this household entered least into subsistence transactions but disposed of more than average amounts of storebought foods.[2] It seems likely that in 1964 the absences of the household head in paid work and of the whole household on a two-week fishing expedition required unusually intensive work in gardening at other times to ensure subsistence. This household receives no labour assistance from others, whereas the entrepreneur's household (23), which devotes the second highest amount of time weekly to cash-producing activities and the second lowest amount to gardening, receives considerable assistance through labour services[3] and this household is prominent in transactions of subsistence as well as of storebought produce. These two households have the lowest cultivated area per household member in the village. It appears that those who engaged in full-time wage employment for more than two or three consecutive weeks find it difficult to maintain their gardens and therefore meet their traditional obligations in the

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[1] The household head has no rights to land for cash cropping in Inonda. See p.60.

[2] See Tables 11:8 and 11:9.

[3] The difference may be due to the fact that the head of household 23 is the head of the dominant lineage, the most educated, experienced and prestigious man in the village. The head of household 22, on the other hand, was the sole adult member of his lineage and a marginal member of the village. He left Inonda during the survey.

592 exchange network and they must use cash and storebought goods to
512 compensate for this.

[461] Few households differ greatly from the average in the amount of time they devote to household tasks. The widower, like most men, seldom cooked, whereas in household 18 the widow's son was rarely
[462] present and the mean weekly time spent in household tasks is strongly influenced by the time spent in cooking by the widow. Household 16 appears to spend less than the average time since it contains two men as well as the wife's mother, who does not cook as often as her daughter. The small amount of time spent by household 22 is probably due to the fact that the members had comparatively few clothes and so little time was spent in washing.

164 As mentioned, much of the time shown as spent in sickness involves visits to the aid post and particularly to the fortnightly infant welfare clinic. Households containing small children, then, appear to spend most time in sickness. When days, rather than hours of sickness (including periods spent outside the village at hospital or the aid post), are taken into account, it is the households containing people over 45 that are most often sick. Household 24 spends on average 1.3 days per man-week in sickness. In addition to regular fevers, the household head suffered an anal prolapse in August and he and his wife spent the last 19 days of period II at Saiho hospital. Households 18 and 19 have the next highest sickness rates. Household 16 also has a comparatively high rate, largely because of the presence of the wife's aged mother but also because the whole household was sick with influenza during most of the last two weeks of the survey. All of the other households spent less than half a day per week in sickness.

592 There is not much difference between households in the amount of
512 time spent on social obligations. The widow and the wife of the head of household 21 spend rather more time than others in visiting, while the entrepreneur's household, (23), and the widower do little, and the latter was also unable to attend two feasts on account of sickness.

592 In addition to differences in activity patterns between the in-
512 dividual households, certain distinctions appear between cash cropping and non-cash cropping households as groups. As is to be
461 expected, cash cropping households spend more time in planting and tending commercial trees. Non-cash cropping households spend only 0.2 hours per man-week in cash cropping, assisting others and working on the copra project, but even cash croppers spend an average of only 1.5 hours per week on their trees. The two categories devote a similar amount of time to paid work and entrepreneurial activities - primarily because the Jego'undi man's period of work on the settlement block was intensive enough to outweigh the effect of the older non-cash croppers, who did no paid work. On average, people in non-cash cropping households spend 3.5 hours more per

592 512 461 week than those in cash cropping households in subsistence gardening and also more time in clearing, even though one of the former was clearing a garden for coffee. This is largely the result of the efforts of the widow and widower and household 24 in assisting others, as described above. Balancing the greater amount of time spent by non-cash cropping households in productive subsistence activities, the cash cropping households spend more time in tasks concerned with the external agencies, particularly purchasing, in household tasks and in sickness and care of the sick. This last is without taking the separately-recorded days of sickness into account. [757] In fact, the non-cash croppers, being generally older, are more liable to prolonged periods of sickness and are also more reluctant to go to the aid post when sick - often instead using a stinging leaf known as irongo as a counter-irritant for a variety of ills. In addition, three wives of cash croppers attended the infant welfare clinic regularly but only one non-cash cropping woman had an infant child. Table 7:7 shows details of these separately-recorded days of sickness, including sickness during absences.

Table 7:7

Inonda: days spent in sickness per man-month

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	Cash cropping households	Non-cash cropping households
Personal sickness:		
within village	0.8	1.5
outside of village	0.5	0.7
Care of sick:		
within village	0.1	-
outside of village	-	0.7
Total	1.4	2.9

592 512 461 Although the cash cropping households have, on average, a longer working week than others, it is clear that this is not due simply to time spent on their cash crops. It is noteworthy that non-cash cropping households, as well as spending a greater proportion of time in subsistence gardening, also dispose of slightly more garden produce per week than the cash cropping households, while the latter record a net inflow of garden produce and dispose of more store-bought foods (see Tables 11:8 and 11:9).

462 The division of labour: the influence of sex

Table 7:8 shows the division of labour between the sexes. As would be expected, men perform the major part of the heaviest tasks, including planting crops as well as clearing and fencing gardens,

[TEXT CONTINUED ON PAGE 148]

434 For example, during period II the sample's income ranged from $1 in one week to almost $50 in another. Since the turnover of cash is rapid and little capital formation takes place, the pattern of expenditure closely parallels income, and exceeds it in the latter part of period III when the substantial demand for storebought foods for ceremonial activities is met primarily with savings accumulated earlier in the year. These major fluctuations in the acquisition of cash demonstrate the danger of villagers placing any great dependence on it at this stage of commercialisation of the economy.

The exchange patterns of households

437 Both the volume and variety of transactions vary considerably
● 512 from one household to another, and can be related to specific differences in the resource base of each (see Table 10:9). Thus, there is a distinct movement of labour services within the cash sector from non-cash cropping to cash cropping households, of cash crops from the latter, of the produce of hunting from householders with direct access to shotguns (households 3 and 15), of cash to cash cropping households, and of storebought goods to those households with the highest incomes.

Cash croppers exhibit a much higher volume of transactions than non-cash croppers in all categories apart from subsistence labour services. As suggested by the figures for subsistence produce, this applies equally to transactions in the gift and in the monetary exchange system. As in activity patterns so with exchange: cash
[555] croppers evidence a high level of participation in the traditional village economy. That is, cash croppers are industrious in work and generous in distribution, two qualities which generate respect and status both traditionally and in contemporary Orokaiva society.

The lower rate of disposal of subsistence labour services by cash croppers may be indicative of the greater premium they place on time and a preference for exchanging goods more abundantly available to them but, apart from in the processing of cash crops, there is little evidence that they exploit the system by drawing on unutilised labour from other households. However, it is worth noting that household 15, whose head is the most active male in the sample, does record a high incidence of such exchanges of labour, in particular of acquisitions.

Not only do particular households play an important part in regulating the flow of specific categories of goods, especially the scarce ones of cash, pigs and game, but there are broad variations between households in their general involvement in the exchange system. The bulk of domestic pig is handled by four households (1, 2, 13 and 14), with only very small amounts being distributed or redistributed to others. Some of the households headed by older people (6, 10 and 11) or which are only recently

established in the village (4 and 7) scarcely participate at all unless they make specific efforts to obligate others to them or to settle existing obligations, as with 6 having a sago palm felled and 7 assisting his affines in subsistence tasks on numerous occasions.

The network of inter-household exchanges of these scarce goods and of services, even at the level of co-residents and close kin, suggests the system to be primarily a negotiated and exploitative one with the ideal of communal interests and group security relegated to a subsidiary role. This dual aspect of exchange is exemplified in a statement of intentions made by the head of household 18 where, in distributing some sago, he proposed to make large gifts to three people 'because they are always quick to help me when I am in need of food' but smaller gifts would be made to others since 'it would be an insult not to share with other people when they see I have plenty of sago'. In fact the security with which older people are provided is of a low order if the volume of exchanges with others is considered.

Income and expenditure of cash over 46.5 weeks

The level of the Sivepe people's commitment to the external sector of the economy is demonstrated by their income and expenditure patterns. All households handled some money during the period from February 1964 to January 1965 and even household 4 which registered a gross income of only 50c during the period it was present, left the village with the specific object of seeking wage employment on a Sangara plantation (see Table 10:10). Cash croppers handle substantially more money than non-cash croppers but this fact is not simply a function of the agricultural activities of the former. There are several important avenues available for the acquisition of money, and commitment to cash does not imply any parallel commitment to cash cropping.

As the single most important source of income, remittances rank with proceeds from the sale of cash crops and, for cash croppers, these two provide their main sources of cash. By contrast non-cash croppers derive over half of their income primarily from Sangara settlers and secondarily from other villagers[1] (see Table 10:11).

The value of connections with wage earners and Sangara settlers is enhanced by the gifts of goods frequently associated with the

[1] Some money is also obtained directly from the sale of cash crops. Two cases were recorded of quantities of coffee being given to non-cash croppers in acknowledgement of assistance rendered; while in a third a young member of a non-cash cropping household emulated his brother in exploiting the communal rubber planting.

A, [See Category 511, p. 205--Analyst]

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

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The exchange patterns of households

(a) The circulation of goods and services

Tables 11:8 and 11:9 present the patterns of exchange of the main groups of items for each household. The different sizes of households and the different numbers of days for which information was collected have been taken into account in calculating transacting rates.

It is clear from these tables that there is little difference between most households in the rate of acquisitions and disposals of garden and forest produce and the differences are even less when acquisitions and disposals are added and viewed as total turnover. Household 18, which contains the widow Embogi, is outstanding. This reflects partly the lack of a permanent male resident, whose lower average rate of transaction would reduce the general household level (as in the other households). More significantly, it reflects the fact that Embogi spends more time in subsistence gardening than any other villager[1] and also receives much assistance in gardening. The product of gardens made by others on her behalf is in excess of her own household's needs and so is distributed. A further factor is that, as a widow with only permissive rights to live in the village, generosity in distribution helps to ensure continued acceptance of her position. This applies to household 24 as well, which also gives more than the average amount. Household 24 receives less than average amounts of garden foods but has the highest rate of acquisitions of products of hunting and fishing. The household head is father-in-law of the two most successful hunters in Inonda and often receives gifts of whole carcasses from them. The widower in household 19 does not cook meals and disposes of very little garden produce.[2] For the same reason, he receives only cooked meat in comparatively small quantities rather than whole carcasses. There are wider differences in the patterns of exchange of hunting and fishing products, reflecting in large part the amount of time devoted to hunting by the household heads. The more skilful hunters spend more time in this way than other people. It is noteworthy that household 20 disposes of most game and little garden produce, indicating a degree of specialisation that is recognised by the other villagers, several of whom give this man cartridges with which to hunt on their behalf.

The main influence on the patterns of labour services is sago-making: the three men who harvested trees in 1964 (households 16,

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[1] See pp.167-8.

[2] It was discovered too late for recording that his son's wife often harvests in the widower's garden.

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

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Table 11:8

Inonda: transactions of main categories of subsistence produce and services, by household
(quantity per man-week)

Household	Garden and forest produce (lbs)		Hunting and fishing produce (lbs)		Labour services (hours)	
	A	D	A	D	A	D
16*	31.7	28.5	4.4	1.4	2.5	1.2
17*	29.1	27.4	3.9	6.6	1.8	0.6
18	50.3	59.9	4.3	1.4	1.6	1.8
19	21.0	7.8	0.3	4.8	0.3	2.3
20	29.5	22.1	3.7	20.1	0.3	1.6
21*	35.2	31.6	6.5	4.9	2.6	1.0
22	11.2	21.6	4.1	-	-	-
23*	32.5	26.5	6.0	9.7	2.6	1.3
24	17.9	36.6	11.7	1.9	0.6	0.2
Mean for 9 households	29.7	29.0	5.2	6.3	1.6	1.1
Mean for cash cropping households	32.0	28.5	5.1	5.3	2.4	1.0
Mean for non-cash cropping households	26.6	29.7	5.3	7.8	0.5	1.2

* Cash cropping households.

17 and 21) all received more assistance in total than the average, while households which assisted with sago-making, such as households 19 and 20, disposed of more in total. However, household 23 received assistance in house construction and subsistence gardening but not in sago-making. In addition to receiving help with sago-making, household 21 received assistance in establishing a coffee garden. Most of this assistance was given by his mother, the widow in household 18. The widower gave most assistance per week (as well as a considerable quantity of hunting produce), in return for the surplus of vegetable produce he received.

Acquisition and disposal rates for storebought goods and cash also differ little from one household to another. Household 22, although present only during period I, records a comparatively high rate of transactions for food and stimulants. While resident in the village the head spent several weeks working for a settler and two weeks away on a fishing expedition. It is probable that his gardens suffered accordingly, making considerable purchases of rice necessary. The man belongs to the traditionally subordinate clan branch, Jego'undi, and, being neither a cash cropper nor a particularly influential person, his circumstances may have provided an incentive

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Table 11:9

Inonda: transactions of cash and main categories of storebought goods, by household
(mean amount transacted per man-month in $)

Household	Cash		Food and stimulants		Household and working equipment	Personal goods
	A	D	A	D	A	A
16*	2.12	2.95	1.34	0.24	0.16	0.65
17*	1.19	1.26	1.54	0.27	0.14	0.97
18	0.07	0.39	1.35	0.30	0.23	0.44
19	0.23	0.38	0.90	0.02	0.22	0.18
20	3.12	3.76	2.94	0.30	0.37	0.70
21*	3.20	2.89	3.08	0.43	0.40	0.20
22	2.12	2.93	3.14	0.62	0.24	1.04
23*	11.45	12.33	4.22	0.70	1.71	3.99
24	3.97	1.44	2.20	0.15	0.15	0.01
Mean for 9 households	3.39	3.53	2.32	0.34	0.43	0.99
Mean for cash cropping households	4.23	4.64	2.41	0.39	0.56	1.38
Mean for non-cash cropping households	2.26	2.01	2.20	0.26	0.25	0.45

* Cash cropping households.

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to demonstrate wealth not only by buying rice but also by distributing it frequently. This household is second only to the entrepreneur's (household 23) in its level of transactions of storebought goods. In contrast, it acquired relatively little garden produce and a below-average amount of game and fish per week and it took no part in the exchange of services, reflecting the weakness of its links with the Andirihaha residents. Household 23 has the highest rate of acquisition of personal goods. Apart from purchases (see Table 11:11) this household received the clothing parcel from Australia. Household 17 also has quite a high rate of acquisition of personal goods. During the survey, the husband and wife had a quarrel in which most of their clothing was destroyed and had to be replaced - much of it by gifts from the wife's sister, who is married to a plantation labourer.

Over a given period cash croppers receive more of most classes of items than non-cash croppers, with the exception of fish and game. Non-cash croppers tend to dispose of more subsistence goods and services, but cash croppers dispose of larger amounts of monetary items, admittedly largely due to the high level attained by the entrepreneur in household 23. Apart from this household, there is nothing to distinguish individual households which rely on commercial crops for their income from households relying on other sources.

8: Waddell & Krinks E-4,5 (1964-1965) 1968 OJ23 Orokaiva OJ23

In the same way, there appears to be little relationship between the levels of transactions in most categories and either the rank of household heads or the total area cultivated by households. Where possibly significant differences in the rates of acquisitions and disposals appear, they are mostly explainable in terms of the various factors mentioned above. However, as regards rank, it is striking that the leading man's household is first in its rate of acquisition of most items, though only second for taro and pigmeat. It leads in acquisitions of both cash and subsistence sector services and is second in its rate of disposals of taro, banana, pigmeat and subsistence services.

It appears, then, that high status confers both material responsibilities and benefits. The main advantage accruing to the entrepreneur seems to be that he needs to spend less time than others in gardening and the time thus saved is directed into cash-producing activities.[1] This consideration applies only to the leading man and transactions according to the other rankings do not fall into a noticeable order.

(b) The expenditure of cash

Table 11:10 shows the pattern of purchases by each household during each recording period and over the whole survey. While there are considerable differences between households in the total value of purchases and a wide range in the proportion of cash income devoted to commodity purchases, there is less difference in the actual composition of the expenditure patterns (see Table 11:11).

For all but one household (which has a total expenditure below $3), food and stimulants account for over half of the purchases. Rice forms between 7 and 16 per cent of the total of all except the Jego'undi household, the proportion varying little over the survey. Flour on the other hand, was bought only during period II, when it formed almost one-quarter of all purchases and the proportions of tinned meat and fish in particular were reduced. The proportion formed by clothing and personal goods is also reduced at this time. All households, except the widow's, purchase flour, the amount bearing no relation to income.

None of the households containing the older people (18, 19 and 24) bought clothing, while only one (24) bought any other personal goods or tools and equipment. Apart from these, the other non-cash cropping households (20 and 22) also spend small proportions on these categories and on household goods compared with the proportions of expenditure allocated by the cash cropping households (16, 17, 21 and 23). Clothing accounts for one-quarter of the expenditure of three of the latter households.

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[1] See pp.161-2.

Table 11:10

Iaonda: household expenditure patterns during each recording period
($)

Household	Subsistence	Rice	Tinned meat and fish	Bread	Flour	Other foods and stimulants	Clothing	Other personal	Household goods	Tools and equipment	Total
Period I											
16	-	0.80	0.40	-	-	1.14	1.20	0.14	0.10	1.24	5.02
17	-	0.40	-	-	-	0.30	-	-	-	-	0.70
18	-	0.20	0.14	-	-	0.84	-	-	1.40	-	2.18
19	-	0.20	-	-	-	-	-	-	-	-	0.20
20	1.50	1.60	3.00	1.24	-	3.08	1.20	0.50	0.20	0.40	12.42
21	0.10	1.70	2.04	1.44	-	3.44	-	0.50	0.54	0.60	10.76
22	0.90	2.80	0.74	0.74	-	2.08	1.00	-	0.24	0.30	8.80
23	1.20	2.20	3.32	1.82	-	5.88	18.18	4.96	1.06	1.14	39.76
24	2.20	0.50	0.42	-	-	3.94	-	-	0.14	0.50	7.70
Sub-total	5.90	10.40	10.06	5.44	-	20.20	21.58	6.10	3.68	4.18	87.54
Per cent	7	12	11	6	-	23	25	7	4	5	100
Period II											
16	-	0.80	0.30	0.20	1.40	1.24	-	1.60	0.12	0.50	6.16
17	-	0.60	-	0.20	2.00	0.50	-	-	0.20	0.20	3.70
18	-	0.20	-	-	-	0.10	-	-	-	-	0.30
19	-	-	0.40	-	0.70	-	-	-	-	-	1.10
20	-	0.70	0.84	0.60	4.60	2.34	-	0.20	0.04	0.30	9.62
21	-	0.80	0.60	0.40	1.40	1.30	-	-	0.10	0.20	5.00
23	0.90	1.80	1.74	1.40	1.80	5.32	1.30	0.40	3.60	4.66	25.12
24	0.10	0.60	0.14	-	0.70	1.14	-	-	-	-	2.68
Sub-total	1.00	5.50	3.82	2.80	12.60	12.34	1.30	2.20	4.06	5.86	53.68
Per cent	2	10	7	5	23	23	3	4	11	11	100
Period III											
16	0.10	2.40	3.24	0.60	-	5.16	7.34	0.90	1.54	-	21.28
17	-	0.40	0.30	0.70	-	0.40	2.10	0.20	0.10	-	4.20
18	-	-	-	-	-	0.20	-	-	-	-	0.20
19	-	-	-	0.20	-	-	-	-	-	-	0.20
20	0.46	0.60	0.70	1.40	-	2.30	1.20	0.10	0.26	1.24	8.26
21	-	-	1.20	0.20	-	0.96	2.04	-	1.74	0.30	6.44
23	0.10	2.10	3.52	1.70	-	6.56	1.68	1.66	0.02	5.12	22.46
24	0.20	-	-	-	-	1.08	-	-	1.00	-	2.28
Sub-total	0.86	5.50	8.96	4.80	-	16.66	14.36	2.86	4.66	6.66	65.32
Per cent	1	8	14	7	-	26	22	4	7	10	100

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Table 11:11

Inonda: household expenditure on commodities over the whole survey period

Household		Subsist-ence produce	Rice	Tinned meat and fish	Bread	Flour	Other food-stuffs and stimulants	Clothing	Other personal goods	Household goods	Tools and equipment	Total
16	$	0.10	4.00	3.94	0.80	1.40	7.54	8.54	2.64	1.76	1.74	32.46
	%	0.3	12.3	12.1	2.5	4.3	23.2	26.3	8.1	5.4	5.4	99.9
17	$	-	1.40	0.30	0.90	2.00	1.20	2.10	0.20	0.30	0.20	8.60
	%	-	16.3	3.5	10.4	23.3	14.0	24.4	2.3	3.5	2.3	100.0
18	$	-	0.40	0.14	-	-	0.74	-	-	1.40	-	2.68
	%	-	14.9	5.2	-	-	-	-	-	-	-	-
19	$	-	0.20	0.40	0.20	0.70	-	-	-	-	-	1.50
	%	-	13.3	26.7	13.3	46.7	-	-	-	-	-	100.0
20	$	1.96	2.90	4.34	3.24	4.60	7.62	2.40	0.80	0.30	1.94	30.30
	%	6.5	9.6	14.3	10.7	15.2	25.1	7.9	2.6	1.7	6.4	100.0
21	$	0.10	2.30	3.84	2.24	1.40	6.10	2.04	0.50	2.38	1.10	22.20
	%	-	12.7	17.3	10.1	6.3	27.5	9.2	2.3	10.7	4.9	100.0
22	$	0.90	2.80	0.74	0.74	-	2.08	1.00	-	0.24	0.30	8.80
	%	10.2	31.8	8.4	8.4	-	23.6	11.4	-	2.7	3.4	99.9
23	$	2.20	6.10	8.58	4.92	1.80	17.76	21.36	7.02	6.68	10.92	87.34
	%	2.5	7.0	9.8	5.6	2.1	20.3	24.5	8.0	7.6	12.5	99.9
24	$	2.50	1.10	0.56	-	0.70	6.16	-	1.00	0.14	0.50	12.66
	%	19.7	8.7	4.4	-	5.5	48.7	-	7.9	1.1	3.9	99.9
Total	$	7.76	21.40	22.84	13.04	12.60	49.20	37.44	11.16	14.40	16.70	206.54
	%	4	10	11	6	6	24	18	5	7	8	100

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Only three households bought subsistence produce in more than one recording period. The entrepreneur's purchase of Xanthosoma has been mentioned above. Areca is bought at any time of the year. Other subsistence purchases consist of smoked meat and fish from hawkers and almost always take place immediately prior to feasts if hunting has not yielded enough meat. Purchases of the major storebought foods similarly reach peaks when feasts or parties occur. Also, some purchases of items such as rice, tinned fish, bread, sugar and sweet biscuits are made every week by one or another household. Households 20, 21 and 23 are the most regular purchasers.

Household 23 accounts for 42 per cent of all purchases and therefore strongly influences the average figures for the village as a whole. Rice in particular and storebought foodstuffs in general form a lower proportion of its expenditure than of any other household, although the actual amount spent on these items is much greater. This household also disposes of storebought foods at a higher rate than any other. Household 22 disposes of storebought foods to others at a rate little below household 23 and 72 per cent of its expenditure on commodities is on storebought foods, with a further 10 per cent on subsistence foods and areca.

Figures 11:3 and 11:4 illustrate some relationships between total cash income and expenditure over the eleven months from February 1964 to January 1965. Although the sample is small and the relationships are not straightforward, it is clear that there is a tendency for expenditure on food and clothing to form a declining proportion as expenditure on all commodities rises. Items which increase in significance are household and personal goods and working equipment. As total expenditure increases, the proportion spent on goods and services declines. However, there is no apparent tendency for total expenditure (including that on services, gifts, loans, gambling, tax payments as well as purchases) to decline in proportion as income rises. As Table 11:13 shows, only one household has a cash balance over an eleven months' period of more than a few dollars. The directions of outlays over and above expenditure on commodities are shown in Table 11:14. Some of these avenues (such as payments for labour and gun and trading licences) are followed only by the entrepreneur. Tax payments are made only by the younger people, as the old and infirm are exempt, and tax payment consumed more of the income of the three households that paid it than any other item except purchasing. The head of household 22 did not pay tax and was later jailed. The other main expenditures include gambling, deposits in savings accounts and gifts and loans. Of these, gifts account for the greater proportion of expenditure.

It appears, then, that of the calls on income, tax payment has first priority for most people, although food purchases come first for household 22. Food and then clothing purchases are next in

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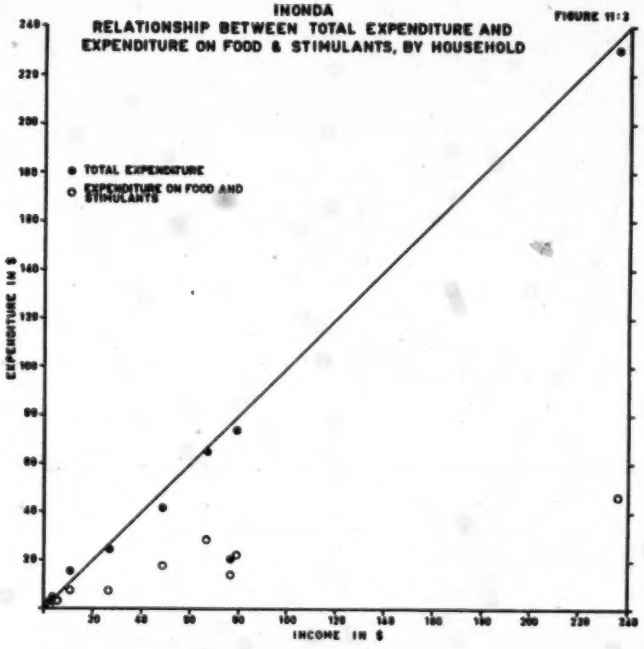
INONDA
RELATIONSHIP BETWEEN TOTAL EXPENDITURE AND EXPENDITURE ON FOOD & STIMULANTS, BY HOUSEHOLD

FIGURE 11:3



priority. Inonda people with incomes below $20 over the 26-week survey spent virtually all their income in purchasing (apart from tax payment). As income rises above this level, expenditure on commodities increases but people also are able to invest their money or to circulate it in the form of gifts, with the latter having greater priority. Monetary investment (whether in purchases of shares or deposits in savings accounts) usually involves larger sums than gifts which may be as small as 10c, but gifts are much more frequent and are a more characteristic element in the exchange patterns. Naturally, the higher cash income a household receives, the more it is able to dispose of in gifts as well as meeting its own material needs. As generosity in distribution is a major source

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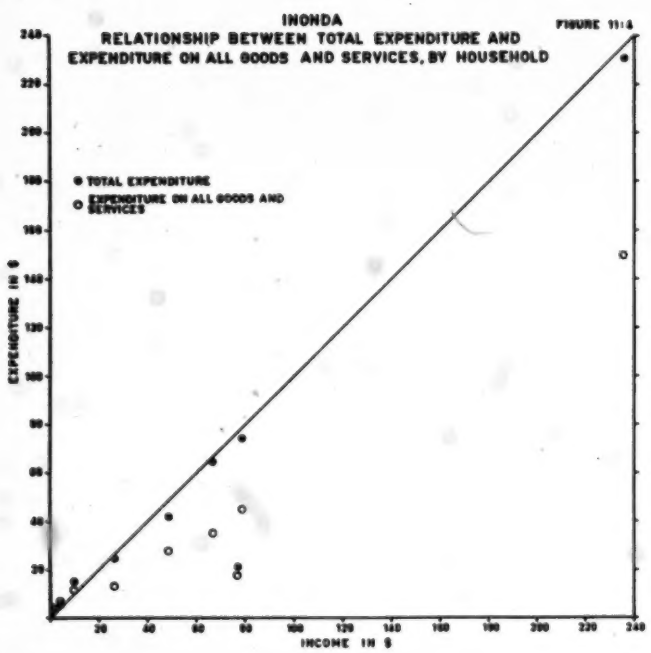

of prestige, income should show a positive correlation with rankings and Table 11:12 illustrates this.[1]

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Again, the relationship is not clear-cut - household 19, the widower, has a very low income but high status in certain respects, reflecting his age, his knowledge of land and personal relationships

[1] All the household heads were ranked in terms of both the people's own evaluation of their status relative to each other, and the researchers' observations on individual wealth, participation in village affairs, influence in decision-making, etc.

8: Waddell & Krinks E-4,5 (1964-1965) 1968 OJ23 Orokaiva OJ23

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Table 11:12

Inonda: cash income during the whole survey period and rank of households

Household	Rank	Income in $
23	1	147.72
20	2	41.44
24	3	41.30
21	3	39.40
16	4	38.50
17	4	16.40
22	4	10.60
19	2	1.50
18	4	0.50

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592

and his generosity with his main resource, labour. Household 16 is grouped in the lowest rank although its income level is in the same order as people in the second and third ranks. A further complication is that household 24, though accorded a relatively high rank, has a comparatively low rate of expenditure, particularly in the form of gifts of either cash or storebought foods. Allowing for these factors, however, it seems that the qualities that gain respect for an individual within the traditional village sphere of operation also tend to be those that encourage the acquisition of cash.

Income and expenditure of cash over 47 weeks

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The figures in Table 11:13 represent current income from all sources, including withdrawals from savings accounts and all expenditure, including deposits in savings accounts. Unlike the data for other items of exchange, details of income and expenditure of cash were collected not only for the three recording periods but also for the intervening weeks. Although this subsidiary data may be rather less accurate than the rest, it has been taken into consideration in some of the tables below and thus provides a record of cash transactions over 11 months, from February 1964 to January 1965.

Table 11:13 shows the total income and expenditure of cash per household over 11 months, including the coffee season, and reveals that there is a net inflow of cash amounting to $72.96 for the village as a whole or $8.12 per household. In fact, however, both income and expenditure vary widely between households. Also, the income of households 16, 21 and 23 includes withdrawals from savings accounts and the expenditure of household 23 includes a deposit in his account. Household 23 has the highest income with $235.42, which is 43 per cent of the total for all 9 households, but its expenditure

8: Maddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

Appendix 1

Sivepa and Inonda: characteristics of the samples

(i) Demographic

	January 1964	Births	Deaths	Arrivals	Departures	January 1965	Net change
Inonda	35	nil	nil	3	7	31	-11.4%
Sivepa							
Village	114	3	2	3	20*	98	-14.0%
Sample	63	2	1	3	17	50	-20.6%

(ii) Household

	No.	Size		Labour units		With individual cash crop holdings
		Average	Range	Average	Range	
Inonda	9	3.9	1-6	2.0	0.8-3.4	4**
Sivepa						
Village	23	5.0	1-10	2.5	0.0***-4.5	10†
Sample	14	4.5	1-7	2.4	0.8-3.8	4†

(iii) Educational experience of the sample household heads

	None	Prep. to Std I	Std II to Std IV	Std V to Std VII	Std VIII plus	Agricultural training	Technical training
Inonda	3	2	1	1	nil	1	1
Sivepa	9	4	1	nil	nil	nil	nil

(iv) Work experience of the sample household heads

	Period††								
	Under 1	1-1.9	2-2.9	3-4.9	5-6.9	7-9.9	10-14.9	15-19.9	20 and over
Inonda	1	1	nil	2	3	nil	nil	1	1†††
Sivepa	3	1	1	3	2	1	1	nil	2§

* Eleven (55 per cent) moved to other villages, the balance sought wage employment either within the District or in Port Moresby.

** One man planted 200 coffee trees during 1964.

*** An aged widow.

† However, all villagers have access to a communal rubber plantation, tapped on a rota basis.

†† An expression of the number of years in paid work (where unskilled) multiplied by 1.5 (where skilled but without responsibility) and multiplied by 2.0 (where skilled with responsibility).

††† This man served 27 years as a mission teacher and has a total 'work value' of 62.

§ Both served as village officials (either village constable or local government councillor) for many years.

163 164 166 942.9 494

592 The household: This usually functions as a single unit of food production and consumption. In the case of a polygamous household, however, each wife plants and cooks separately, and in extended families which accommodate one or more unmarried adults these usually have individual food gardens though their produce is pooled and cooked for the whole household.

592 425 Land rights exercised by the household as a unit are restricted to usufructuary rights for the production of short-term food crops. This situation is analysed in more detail in the following section.

423 613 614 The individual: The land rights of individuals are predominantly a function of their status in relation to particular sub-clans and lineages. From data collected in Inonda we can recognize four distinct statuses:

(1) Primary membership: This is the status of persons who were born or adopted into the descent group and who are domiciled within it. Of the eleven adult males in Inonda, nine were primary members of either the Andiriha or Jego'undi sub-clans. A marginal case not included above is that of the ex-leader of the Inonda village who recently shifted to take over a farm about two miles away on the Girua resettlement scheme. He visits the village frequently and is still treated for most purposes as a primary member.

(2) Contingent membership: This is the status of persons who have been primary members, but have subsequently left the village (either at marriage or otherwise) to live elsewhere. They do not normally lose all their rights by doing so, though the nature of their rights changes. A contingent member, it seems, can generally regain primary membership by returning to reside in the sub-clan (as frequently happens with widows, returning migrant workers etc.). We are aware of eight contingent members of the Inonda sub-clans. Four of them are women who are married to men in other villages. Of the four men, one is away at work in Port Moresby, one is living in his mother's village and will probably remain there, one lives on the land of his deceased sister's husband in another village and the fourth lives in the village of his mother's new

241 it reverted to the Crown, C, as grandson of the main original
423 vendor, regarded himself as having a right in the abandoned pro-
472 perty. After some years of negotiating he now has a ninety-nine
(427) year lease at an annual rental of $7.95. Here he has planted cocoa and coconut trees.

At any time during his twenty years' employment D could have returned to his home area and planted cash crops on the ample family lands there. It was only when the opportunity arose of a (654) resettlement block with a development loan of $1,500 that he (426) decided to undertake cash-cropping; he has now planted over 3,000 cocoa trees.

472 Few Orokaiva are short of land in the area east of Popondetta
423 where the entrepreneurs are located. Land availability is not a factor differentiating entrepreneurs from villagers, but the availability of land other than that held under customary tenure may well be.

241 The entrepreneurs appear to be more efficient food gardeners
472 than many Orokaiva, for even though they average less time garden-
184 ing (see Table 6) they have more extensive gardens, as shown in the following table.

Table 1

Area of land under cultivation for food gardens
(acres)

	Per head of population	Per able-bodied person over 16	Per household
A's hamlet*	-	-	1.45
B's household	1.20	1.20	3.61
C's household	0.67	2.36	4.72
D's household**	0.75	1.50	3.00
Average	0.65	1.26	3.19
Average for Inonda and Sivepe***	0.34	0.69	1.48

* Measured for the six household heads in A's hamlet in December 1965 at the end of a long drought. They estimated their normal garden area to be nearly double this. A lives in a hamlet comprising himself, his brothers and some of his married children. (592) The hamlet is a short distance from the village of Kapurahambo.

** Estimated, not measured.

*** From Crocombe and Hogbin 1963b:10, and Rimoldi 1966:19. Inonda is a village on the sparsely settled plain, Sivepe village is located in the more fertile hilly country where population is denser. They were chosen as apparently representative of the two major ecological zones inhabited by the Orokaiva. All four entrepreneurs live in the former, plain zone.

(361)

A. [Table 6 appears in Category 461, p.19--Analyst]

Cash crops

All four entrepreneurs were familiar with the very small scale cash-cropping which had been undertaken in their villages for many years, but because of the insignificant returns received from activity of this kind they wanted to avoid it. In discussions with the writer, they all referred frequently to their aim to plant on a large scale and to operate their plantations the way European planters did. The main differences were that the entrepreneurs were without capital and that they were prepared, at least until the enterprise was established, to undertake manual labour themselves.

The entrepreneurs A, B and C established their enterprises with the help of their wives and of certain close junior kinsmen. Each has occasionally hired labour, but none has been able to keep the workers for more than a few months (though one man worked for A for three years). The crops grown (coffee, cocoa and copra) are all labour intensive. Moreover, A and B had to clear heavy forest and C heavy undergrowth. A was helped by two younger brothers and in more recent years by two sons and a son-in-law. B has had the full-time labour throughout of his younger bachelor brother who lives as a member of B's household. C was able to enlist casual aid from his two younger brothers in the early establishment phase (and to a lesser extent from his father and his sister's son for food gardening). It is perhaps significant that none of them has called on more distant kinsmen, and none has called on unrelated people of the same village or neighbourhood. The reasons they gave, when questioned, were that the local people were lazy or resentful of their relative prosperity and, in the case of kinsmen, that they might expect disproportionate or inappropriate reciprocity.

B entered into an agreement with four men of two villages a few miles from his own whereby they all helped each other clear separate coffee plots in 1952. As B's was much larger than the others he agreed to provide a small manual coffee pulping machine which all four could use. There was some dissatisfaction by those with small plots with the proportionate benefits derived from the mutual help arrangement, and when B established his cocoa plot in 1959 only he and his brother worked on it.

What rights do the close kin acquire in the crops they have helped to establish? Orokaiva people frequently assist one another to clear land for gardens and this involves no obligation beyond reciprocal help. But planting, husbandry and harvesting were traditionally done by the household and were thus closely associated with rights to the crop. A's enterprise began as a joint venture with his brothers, though the initiative was provided by A. It was not until after World War II that he encouraged and assisted each of his brothers to plant their own individual coffee gardens. A's gardens were then to be for himself and his sons jointly.

241 Later again, in line with an agricultural officer's recommendation,
422 he encouraged each son to plant individually. He proposes that his
592 gardens should be inherited by his sons jointly, with work and
423 profits being shared by them.

428 B's bachelor brother speaks of the cash crops as B's even though both have worked on them equally together, but says that B 'looks after' financial and other matters on his behalf. Whichever of them dies first the other will inherit, but when both die the assets will be inherited by B's only surviving son, a former teacher who shares no interest in cash-cropping.

C claims sole rights to his plantation on the ground that he has compensated his brothers for their help with gifts and by assisting them to establish their own cash crops. There is reason to believe, however, that if C dies before his children are adult, his brothers will probably claim a share. Some other people of
[578] C's village regard the plantation as belonging to several sub-clans jointly and their challenge to his rights was a real threat until he was issued a formal lease.

422 D has no younger brothers, but he did have a government loan
241 (though it was not intended for hiring labour). With the loan
464 and gross profits from his store (see p.11 ff.) he has hired a
[654] total of seven workers at various times. As with the labour occasionally hired by the other entrepreneurs, they have all left within a few months of engagement. The employers give no adequate explanation for this and, as I have been unable to contact the former employees, the reasons can only be postulated. In some cases the employer has had insufficient money to pay them but this has not always been the case. Almost all employees have come from twenty to a hundred miles away and most are from different language
[466] and culture groups from the employing entrepreneurs. This may well be due to the fact that the employer-employee relationship, with
[591] its clear-cut subordination, has no traditional precedent and is incompatible with Orokaiva notions of appropriate interpersonal relationships. New relationships of this kind are probably easier to establish with strangers and outside one's own community.

Since his attempts to engage permanent paid labour were not
[621] successful, in recent years A has frequently arranged for the
[602] people within his hamlet (his children, his brothers and their children, two father's brother's sons and all their spouses) to undertake short-term tasks such as clearing or harvesting. At the end of each task he compensates them in cash or store goods. None of the others has developed this sort of arrangement.

472 The entrepreneurs have all benefited from assistance given by
654 government officers. Before the war A marketed his coffee through the government and he speaks of the Resident Magistrate assisting him to import and install a coffee machine and open a bank account.

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212 C visits every few days and counts cash, takes stock and places orders for supplies. D. manages his own store.

(592) Illiterate store owners are entirely at the mercy of their managers and it is for this reason that A and B have preferred to entrust the work to their sons, though this policy has not always been successful. As a result of management problems in A's store, management was transferred, with apparent success, to another son, but as B has only one son he feels he has no alternative but to persevere with him. C, being literate, can provide a sufficient check on his illiterate manager at least partly because the latter assumes that literacy gives the owner greater knowledge than it does. C formerly had a literate manager who falsified the records, but says the illiterate man has proved completely reliable since he began five years ago.

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452 All the stores have been closed from time to time owing to inadequacy of money to buy stocks. This has been due to the too liberal granting of credit,[1] personal use of store stock by the owner or manager, and the use of gross store income for other purposes.

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434 All the entrepreneurs feel that trade stores provide more money for less effort than cash-cropping. For all except C this has not been the case in practice. In fact, it is likely that A and B have made little or no net profit on their total trading operations since their inception. They are aware of this, but feel that it has been due to difficulties which they now understand and which are therefore less likely to occur in future. For three of the four this is probably true, but all except C appear to expect higher future income from trading than is likely to eventuate. The stores are very small, turnover for the year 1965 averaging $956.[2] They buy their goods at a discount (inappropriately called 'wholesale') from European and Chinese retailers in Popondetta. Their turnover is too small and their knowledge of commerce too limited to enable them to buy wholesale from outside the district. Mark-up on goods has varied from nothing to 30 per cent and for a long time one of them was retailing at the nearest 10 cents above

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[1] Although they say they have a policy of not giving credit, all four have lost money from giving credit in the past. Three of the four find social pressures such that they continue to grant limited credit to close friends and close kin. In December 1965, A had about $60 unpaid credit outstanding, some of it of several months' duration; and two others had smaller amounts outstanding.
(626)

[2] Store turnover for the year for the four entrepreneurs was estimated from available records at $912, $500, $1,992 and $420 respectively.

463 An examination of whether elective positions of responsibility
472 were held before or after entrepreneurial activities commenced
571 suggests that persons with leadership qualities already recognised
621 by the community are more likely to engage in such activities.

Table 7

Time relation between entrepreneurial activity and elected position

Time elected	A	B	E	F	G	I	J	L
Before trade store opened	'	'	'	?	'	?		'
After trade store opened							'*	

* J has been invited to become chairman of the local co-operative store which he helped to establish.

The holding of an elective position of responsibility concomitantly with carrying on entrepreneurial activities is not necessarily an advantage to the entrepreneur. Several of the subjects had found that their community duties were time-consuming and interfered with their trading activities.

463 Household composition. It is impossible to say whether a large
472 household tends to inhibit trading success but the data suggest that
592 it may.

Group I subjects averaged 6.5 persons per household, group II, 5.75 persons and group III, 5.25 persons.

Many entrepreneurs complained that relatives, particularly older ones, took food and other items from the stores without payment but we have no measured data on this point.

Table 8

Size of household

A	8	E	5	I	10
B	3	F	4	J	3
C	10	G	5	K	6
D	5	H	9	L	2
Average	6.5		5.75		5.25

463 Residence in or out of village. In traditional Orokaiva society
472 members of a village or clan were bound together by a complex system
602 of kinship ties and obligations (Williams 1930:335). Subsistence
[366] derives from the land and social security from the fulfilment of obligatory ties which bring reciprocal returns in times of sickness,

Table 19

Traders as at January 1966

	Group I	Group II	Group III
Economic variables			
Store turnover per month	-	under $50	over $50
Store outside village	75%	50%	100%
Average no. of economic trees	702	1,800	168
Traditional valuables	$31.51	$46.16	$7.50
Liquid assets	$37.32	$212.00*	$322.66*
Months of operation of store	19.5	17.75	7.25
Tools and equipment	$124.68	$177.75	$143.97
Loans received: land	50%	25%	-
store	25%	-	50%
Social variables			
Age	35.25	41.75	29
Index of education	26.7	3.75	46.7
Years of paid work	11.25	8.75	4
Non-traditional experience	16.75	10.25	11.75
Job: level 1 responsibility	-	25%	75%
level 2 responsibility	75%	50%	-
Community leadership	50%	75%	50%
More than one leadership position	-	50%	25%
No. of co-operating adult male kin	2.25	2.75	2.5
Size of present household	6.5	5.75	5.25
Eldest son	75%	25%	-
Residence village different from village of birth	50%	75%	75%

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* No information on one subject in group.

The most successful traders had the smallest households, but used the help of co-operating kinsmen more than the least successful (whose present households were the largest) and less than group II (whose households were also large). The moderately successful traders depended most on the help of kinsmen, but not nearly so extensively as cash-cropping entrepreneurs previously studied (see Crocombe 1967). [592] [602]

423 This has been documented by recent research carried out in three
614 Orokaiva areas: at Inonda by Crocombe and Hogbin (1963:28), among the Yega by Dakeyne (1965), and at Sivepe by Rimoldi (1966:95).

[361] Under the traditional Orokaiva tenure system most individuals
[241] have rights to several pieces of land scattered throughout the area claimed by the clan. Thus an individual often has to walk some distance from one food garden to another and he may have only a small area of land on each plot. These facts were significant in determining the attitudes of the Ombi-Tara people to tenure conversion (see Chapter 3).

An individual is considered to have a presumptive right to clear bush behind his plot in order to extend his planting, without consulting other members of the clan.

423 Clearing of bushland is often a community affair, with the
311 lineage and sometimes the whole sub-clan co-operating, but planting
241 is organised by individual households, with some reciprocal assist-
476 ance from other households for specific tasks at irregular intervals.

Land use

241 The Orokaiva grow their crops using a system of bush fallow
311 rotation - sometimes called shifting cultivation - which is common in many tropical areas. Newton (1960:81) describes it as a system under which land is cleared and cropped for two or three years, after which the cultivator allows it to revert to natural vegetation cover and shifts to a new garden. He may abandon land because depletion and erosion cause declining yields, but in many instances he does so because less labour is involved in clearing new land than in using old gardens where weed and pest species are established. Brookfield and Brown (1963:166) suggest that in the absence of fertilisers, capital equipment and improved techniques of agricultural production, no successful alternative to bush fallow rotation has yet been found for tropical agriculture.

Residence patterns

361 The Orokaiva live in villages but each nuclear family usually
[592] occupies a separate house. In pre-contact times villages were large, probably because clan members clustered together for mutual
[621] protection (Williams 1928:155). However, in 1928 Williams noted a
[614] growing tendency for small groups to form independent settlements. Families sometimes lived 'for weeks at a time in their garden houses...no small distance from the permanent village.... Some families...settle permanently on the site of their distant gardens' (Williams 1928:129).[1] The present fairly large village appears to be a relatively recent return to the pre-contact pattern.

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[1] Native Regulation No.90 of 1922 stated: 'The practice of people abandoning their old homes in settled villages and scattering

Chapter 4

Effects of conversion at Ombi-Tara

Land use

657 423 182 Since conversion the blockholders have each planted an average of three and a half acres of high yielding rubber and some have cleared a further two or three acres in preparation for further planting.

311 241 Most households are interplanting their food crops with the rubber seedlings as they say it saves time and effort if all crops are on one plot instead of scattered as before conversion. Thirteen people reported that they have food crops growing on unconverted land outside their blocks. Six of these had blocks about twenty-five minutes' walk from the village, and have planted some food on clan land closer to home. Three of the others said that they intended to transfer their food crops on to the blocks shortly. Three people reported that they have coffee trees which were planted before conversion growing outside the block.

[614] The Ombi-Tara people intend to keep the clan land outside the converted area for use by future generations or by members of the present generation who wish to expand their holdings.

Residence patterns

657 423 182 Those people whose blocks are closest to the village have tended to remain in the village. Those with more distant blocks have either abandoned their village houses and moved to the blocks - six families have done this - or planted some food crops on clan land [361] close to the village to avoid having to walk long distances to get food.[1]

[592] The traditional Orokaiva custom of living in single family households has been maintained, with only four of the thirty-five households at Ombi-Tara containing more than one family. In three

[1] Dakeyne (1965:136) notes that the Yega people moved on to their blocks soon after the Yega conversion scheme began.

657 of these four households one of the resident families intends to
423 build or is building a house into which it will move shortly.

182 Many who have remained in their village have erected temporary
592 shelters on their blocks in which they spend one or two nights at a time. None of the Tara people has left the village, but no one
657 has to walk more than ten minutes to reach his block.

423 Five of the six men who have moved with their families on to the
182 blocks are living in two hamlets. In the first settlement, about
361 twenty-five minutes' walk from Ombi village, two men have built houses on their own blocks on either side of the access road. In addition, they have built a 'meeting house' in which passers-by can sit and chat, and a latrine. One is the son of the other's mother's brother.

In the second settlement, about forty-five minutes' walk from Ombi, three households are situated on one block. The three households belong to the blockholder, his sister's son (who holds an adjacent block) and his father's brother (who is not a blockholder).

[789] The sixth man to have moved from the village claimed that one of the old men at Ombi was destroying his taro by practising sorcery, and moved to his block, ten minutes' walk from the village, to protect it.

[592] Apart from this last man those who have moved to the blocks are living in small kinship groups rather than as individual farmers [484] each on his own block. In addition, each of the block residents [525] spent a considerable amount of time in Ombi village during our stay, particularly while gambling during the weekends. One brought his family to Ombi after his wife had a baby and stayed for a few days in the house of a kinsman.

Although only six men have moved to the blocks, another twenty said they would like to do so in order to be able to work on their rubber away from the distractions of village life, like Council and mission work. Most of these people said that they were 'not allowed' to move. Some said it was Administration policy that people should stay in their villages and quoted particular officers (from two different departments) who had told them not to leave the village. Some said that they were not allowed to move to the blocks until they had a 'licence' (possibly a reference to the title document) or until all the people in Papua-New Guinea had done so, or until the local member of the House of Assembly had been told about it in the House. Some said that they should not move until the Administration told them.

Three people said the Administration favours villagers living on their blocks. Two of these do so and the third said he is waiting till the other villagers move before he moves.

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177 b) The production of crops specifically for sale.

[654] c) The acceptance by the indigenes of
[657] supervision and advice from European and indigenous members of the Agriculture Department: people with whom they had no kinship ties.

[423] d) The location of houses on the blocks.
e) The registration, by some individuals, of freehold title.

245 It is unfortunate that the scheme which appeared so successful in its early stages should have failed largely because of circumstances outside of the people's control.

464 Many Yega have made no attempt to earn
[434] cash from commercial agriculture. From the
[166] time of earliest contact with Europeans some of them have left home to work for wages. At the present time, almost one third of them are absent working, studying, or as dependents.

464 Forty-four per cent of all Yega men are away
178 working. Those who are married are accompanied in almost every instance by their wives
● 592 and children. This situation represents a
166 marked change from the pre-1940 years when many Yega men worked as indentured or casual labourers and could not take their dependents with them. Nowadays most Yega
[466] work in semi-skilled or skilled occupations in which family accommodation is often provided by employers. Even if accommodation is not supplied, the breadwinner's earnings are apparently adequate to provide living quarters for his wife and children; frequently town accommodation is of poor standard but evidently family life is preferred to separation.

871 The main factor in the marked improve-
178 ment in skills is education. The educational opportunities which have been available to the Yega for nearly fifty years have been exceptionally favourable, when compared with
[797] those of most other New Guineans. A mission school has operated in the area since 1909; since 1932 (except for war years) it has had at least one European teacher permanently on
[464] the staff. This educational background has enabled the younger generation of Yega men to take advantage of opportunities for employment in posts of responsibility and higher income which have become available in increasing numbers during the post-war period.

[P16-B]

361 Comparing Inonda and Sivepe, we notice that Inonda follows more closely the spatial arrangements that are considered ideal for modern villages, but that Inonda has remained static in size for a number of decades. Sivepe shows irregularities in spatial arrangement, but has rapidly increased in size in accordance with Australian ideas of village development. The fusion of 1948 doubled its traditional size, while a lineage and a local clan group were added since. These increments have as yet been imperfectly absorbed.

Section 3: Social Groups

621 Within a village, two kinds of kinship group larger than the elementary family may be distinguished, namely the javo wahai (clan) 592 and the hae (lineage, or plant emblem group). We may also distinguish 616 two kinds of residential group, the occupants of a bende or side and of a bande or house. On the nature of the clan I shall be brief here, 614 reserving detailed documentation for my doctoral dissertation. It seems to me mainly a political unit, held together by--in some but not all cases--belief in common descent from a single patrilineal ancestor, by the common name (javo) by which they call themselves and which they call out when slaying an enemy or a pig or in other moments of great stress, by the recognition of obligations towards and claims upon others who bear the same clan name. Rimoldi (1966: 33) is right when he calls the Orokaiva clan "only a social category."

613 The word hae means "plant emblem," but the word is also used to denote collectively all persons sharing the same plant emblem. The clan name (javo wahai) is transmitted only patrilineally, but the transmission of the hae is more complex. A person regards his hae, which may be any plant or part of a plant, or another natural substance, as a part of his own identity. He may respect it in the manner of a totem but such avoidances seem always to have been to some extent a matter of personal choice. (Williams, 1930: 127-218) The hae is used in a number of social contexts as a mark of identity. Williams seemed to believe that a hae was the distinguishing mark of a clan, but later investigators (Crocombe and Hogbin, Rimoldi) take it to be the distinguishing mark of a lineage.

It is indeed true that when a man has a certain hae his children will also use it. The children will also, on occasion, use the hae of their mother, especially when they are on the land of their maternal kinsfolk. There are other, more idiosyncratic forms of inheritance: one man uses the hae of a hereditary friend when he is on the land which passed into the possession of his family through that friend. Normally, maternal hae are not inherited further; no person uses the hae of his mother's mother, or of his father's mother. In these circumstances it is reasonable to assume that a man who has the same hae as oneself is of the same blood. This is not to be understood

621 also reported that there is one plant emblem which all Inonda members
614 of the Andiriha clan have in common, a feature not found in Sivepe.

In discussing household composition patterns, I shall simplify the picture somewhat, as for the purpose of this study it is irrelevant
592 whether children are natural or adopted, legitimate or not, children of both parents or one and whether clan membership is "primary" or "permissive." All these questions would be highly relevant, of course, if we were dealing with a village such as Hohorita, where many people died during the eruption so that many remarriages and adoptions can
[114] be traced to that cause. One of the strange gaps in Williams' ethnography is that he omits any reference as to household composition; in his notebooks, he records household composition for two villages, Burugata and Wasida, showing that in every case in those villages, a household was made up by a husband, wife and children. In one case of a polygamous family, the man had two houses, one for the family of one of his wives and one for the families of the other two.

Informants told me of one rule regarding household composition
592 which is likely to be quite ancient. This is that a man and his wife
606 may not quarrel in the presence of the husband's father (and, needless to say, in the presence of the wife's father). For this reason, the people of Sivepe certainly do n.t like three-generation households when the middle generation is represented by a married couple. It is normal for a married woman to stay with her parents or her husband's parents while her own husband is away working for wages--as is frequent among younger couples. In that case, the household will have three generations, but the middle generation is represented by a woman only, with the husband only an infrequent guest. When I came to Sivepe, and the village was still only half-built, I found three households in which the middle generation was represented by a husband and wife plus, sometimes, a few others. In all these three cases, a change had occurred before I left: the husband and wife had built themselves one house, leaving another for the old people and perhaps some other adults, not including couples. This rule seems to be regarded as less important in Inonda. (See Table 15.)A

My own impression is that the normal household is composed of
592 a nuclear family, as appears from the Sivepe (but not the Inonda)
[594] statistics. Widowers and sometimes also widows live in houses by themselves, even if they have no young children living with them and
[589] do not like staying with their children after they are married. A widower usually has his meals cooked for him by a daughter or other close relative who brings the food to this house. Though occasionally, two married brothers (or other close relatives) live in the same house, this is likely to be a temporary arrangement. I do not think that useful sociological conclusions can be drawn from comparison between Inonda and Sivepe in respect of household compositions, as there are in Inonda only two households of the type I have shown to be highly untypical and these may well be accounted for by idiosyncratic circumstances.

A [See Cat. 116, p. 220--Analyst]

CHAPTER II: Socio-Economic Factors

Section 1: Age, Sex and Marital Status

121 In this chapter, the study of internal variations will be continued, by a consideration of the human resources available to the villages and their economic productivity. A statistical analysis of 162 the population by age, sex and marital status (see Table 16)[A] shows that 469 the labour force lacks a proportionate number of young men in early adulthood; the number of men in the vigour of life is somewhat smaller, 166 in Sivepe, than the number of women. The reason for this change is 167 that young men leave the village to earn money elsewhere. They often do this before marriage, so that the bachelors' houses tend to be 464 occupied by a much smaller number than formerly; but after they are married they usually do not at once settle down in the village. It is 583 unusual nowadays for a brideprice to be paid in full at the time of the wedding. Usually this payment is delayed; the young husband goes out to work for it and after one or two years he sends back money and it is paid. At the one brideprice payment I observed in Sivepe, the groom was not even present. He was at his job in Port Moresby and the role of groom was taken over by another man from the same lineage--a married man with six children, as it happened, who duly cut the firewood and carried the water required for the entertainment of his [484] affines. Even after the bridewealth is paid, then, the husband continues to work at his job, rarely seeing his wife as travel is expensive and leave infrequently granted.

Because of these infrequent visits, young wives have few 593 children, but they receive regular gifts of money from their husband. ●592 Eventually, the husband returns home; it is hard to say just what makes him decide. Before the age of 30 he usually starts to establish a family, and he then stays home continuously, to look after his garden [469] and his coffee. He may occasionally go back to town for a few months to earn money, but judging by the few examples I saw, he is not always successful at finding a job and even if he does so, he takes an early opportunity or uses an early excuse, to return home, carrying home some presents for his family and perhaps a little money. The family does not seem to be too troubled about the loss of earnings that result from his return. Some men manage to find accommodation for their families in town, in which case they all migrate.

This generalised picture needs qualifying. There were six Sivepe women (out of nine married women with absent husbands) who received regular gifts; three of these women were living in the household of a single man while another family head had under his control two

A [See Cat. 116, pp. 221-222--Analyst]

593 further such lucrative young females. Of the six, two were Sivepe
592 women while the other four were women from other villages residing virilocally. A great many other families did not derive income in this way. Some of these, however, had daughters living in other villages, and their husbands too were sources of institutionalised gifts.

464 Though Waddell showed that the loss of adult male workers
433 through migration is already serious (37.8% in Sivepe and 25% in Inonda), the point had not been reached when the loss of manpower led to a decline in the production from garden lands. Waddell may, however, be right in ascribing the increasing consumption of the inferior Xantosoma taro (see page 35 above) to the deflection of the
889 adult male labour force which had to support old people whose vigour had declined. The older men did not stop work abruptly at a certain age; they would continue to go to their gardens, but the areas cultivated would become smaller; their children or young affines would help them. If an old man became widowed his daughter or daughter-in-law would cook food for him; in the case of a widow, uncooked food might be given, but most widows tend to live in a house where there are male relatives, the only two exceptions in the sample being the two widows
[463] who stayed in the old village of Sivepe. There are also activities which are a specialty of the old: they tend to be the village artists and also the village sorcerers. When we wanted to buy artifacts, it was the old men who made the ornaments, the old women who made the best pots and painted the best bark-cloth. Similarly, the most active curers in the village were two old men and one old woman.

595 I saw no evidence of polygamy currently practised. Marriages
585 were always consecrated at the time the couple was baptised. Several
586 people had at one time been divorced, but this was prior to the time of baptism.

464 In Inonda, as I wrote earlier, no absent husbands sent money home. The only woman at Inonda whose husband was away from the village was in jail, after breaking into a trade store with a hammer belonging to another man from Inonda. On the other hand, one man earned a living as a government driver, thus becoming more or less removed from the work in his subsistence and coffee gardens. Some other men took over his work, in return for appropriate counter gifts and services. In both villages, therefore, a pattern existed of outside earnings derived by a limited number of people whose garden work was taken over by other members of the village labour pool, while the money earnings were in one way or another widely shared among villagers.

Section 2: Division of Labour

114 The division of labour was the special subject of a study
464 A carried out in Sivepe by my predecessor, Mr. Waddell. As he has been

[See Cat. 116--Analyst]

521 of them made frequent visits to Popondetta and there met urbanised Sangara. A group used to meet in the hotel for what were often political discussions arising out of current events and rumours. This emphasis on the political and ideological reminded me of what I had seen among the Maori, the Indonesians and what is reflected in recent African studies: the kinship universe is crosscut by other ideas presupposing a political centre, centralised power, fundamental social and economic changes. The presence of Papuan public servants made [474] much difference here. For instance, nobody in Sivepe, discussing savings accounts, would have thought of telling me that there are 54 cooperative societies in the district only four of which are Savings and Loan Societies. This group knew the pulse of the Northern District in concrete factual terms while Sivepe relied on disconnected phenomena that happened to drift into their ken and from which their suspicions and hopes shaped an image sustained by the stories of their councillor.

Section 5: Internal Influences of the Eruption

361 Compared to the two sample villages, Hohorita is a more densely
621 concentrated settlement, with 348 inhabitants in 41 houses. When I was there, there were still two clearly separated araha; the dominant
[161] clans of the front village section were Horeopa and Oripa; in the back, Besupa and Sehopa. But within each section, there was no striking separation of the clans into "sides" as in villages in the Sasembata district. House distances were as at Sivepe.

614 In contrast to Sivepe, there is no tendency for clan groups to
621 fuse, 12 independent names being given to me. This number can be somewhat reduced if we ignore those clan names represented by a single family where the wife belongs to one of the major Hohorita clans--the wife is then the "sponsor," in Fischer's sense, of the household. Thus, two of the clan names given to me belonged to immigrants from the Sasembata district who had married into Sangara. For all practical purposes their allegiance lay with the clan of their wives. The other clan names were all Sangara, representing survivors from numerous pre-eruption villages.

592 In household composition, the smaller settlements of Sombou and Kakita rather resembled Sivepe, but in Hohorita three-generation households were more common and bachelor's houses were not found.
[597] Furthermore, many children were left parentless through the eruption and these were adopted by Hohorita households, especially by childless ones. As a result, childless households in Hohorita are far rarer than in Sivepe. A considerable number of marriages and remarriages
[423] occurred immediately after the eruption. The sharp drop in population, furthermore, left Sangara with plenty of land for the survivors, so that 25-35 year age group is far better represented in Horotia than in Sivepe.

TABLE 15

HOUSEHOLD COMPOSITION; SIVEPE AND INONDA COMPARED

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Note: The term "augmented," applied to a household, denotes that the household includes adults outside the nuclear (or extended) family, but that these adults are living without a spouse.

Household Type	Inonda	Sivepe
1 Generation	1	3
Nuclear	2	12
Augmented Nuclear	-	2
Double Nuclear	2	-
Simple 3-Generation	1	4
Augmented 3-Generation	1	3
TOTAL	7	24

241 of "dry" gardening, with fire and the digging stick as the essential tools, and either long term rotation of previously occupied areas or breaking in of new forest land. "The immediate family . . . is a self sufficient unit" and "the Orokaiva words for 'work' and 'garden' are one and the same." Con-
62 sistent with this mobile economic base, settlements are rarely more than hamlet size, with "hardly more than a dozen houses" on the average. Materials for housing are readily available, so that residence can be easily shifted.

The hamlet is based normally on patrilocal-patrilineal principles of organization, with a known strong tendency for new groups to form by "hiving off." Clan affiliations are
(614) reckoned from quite recent ancestors, so that at times a given clan may all be in one settlement, though more usually scattered through several closely related settlements. The
592 generally monogamous family units are under the "immediate
62 authority of the father," while the affairs of the local living
622 units are under loose supervision by the hamlet and clan elders, centered on a "men's house" and working together, usually with one strong senior man as "leader." Personal
422 property consists of mobile goods such as tools and utensils, clothing, and body ornaments.

181 In spite of ethnic similarities over a wide region, Williams speaks of the Orokaiva as being a "more than usually quarrelsome and disunited people"—a strong statement to make in the New Guinea setting. Their pre-pacification history was marked by "feuds, dispersals . . . a veritable whirlpool of strife, migration, and counter-migration." Beaver, too, refers to their "turbulent and restless life . . . migration was, in
(754) the main, a matter of attacking, fleeing, and pursuing." Supernatural weapons in the form of sorcery were especially feared. Even for Papuans, the Orokaiva proved to be unusually
(562) hostile and resistant to whites. Women were often seen ac-
(726) companying the war parties, carrying food and weapons, and sometimes joining in fights. Williams goes on to say that
(628) while the "elementary small sympathy-groups" (the local kin and settlement units, and to a lesser extent the dispersed clan units) were tightly knit, their external relations were
(728) precarious. "There were peacemakings or truces, but the truce was always a fragile one, and no (settlement) lived
361 in permanent security." "Hiving off" occurred sometimes
241 as the result of a "quarrel and the fear of retaliatory magic,"
(518) but more often it was "simply the lax method of horticulture which necessitates the clearing of many areas in succession and sometimes a temporary settlement on a distant site."
361 Another factor could have been food scarcities which tend
261 to occur in exceptionally dry southeast winter seasons. During this period, north and west Lamington area is in a rainshadow zone, and people may have to scatter out to live on wild
931 roots and fruits. The implication of this is that even the
165 excision of the 4,000 persons from the Orokaiva group who were killed involved no extensive shattering of valued ties.

361 Williams and others judge that with the modern pacifica-
178 tion, the Orokaiva have tended to disperse in even smaller living units than before. This appears to apply particularly
(199) to the relatively densely populated Lamington slopes, though a few instances of larger aggregations approaching a village
361 type also occurred, particularly as a result of Mission influ-
571 ence. Over against this greater dispersal, the people have;